

Chapter 6

Suburban Policy Area

General Characteristics

The Suburban Policy Area in the easternmost portion of the County is where most of the residential and commercial growth has occurred over the past fifteen years. The area covers approximately 60,000 acres, including the Washington Dulles International Airport property, and comprises areas that have been developing under area plans for Eastern Loudoun, Dulles North, Dulles South, Cub Run, and the Toll Road. (See Suburban & Transition Policy Areas Map, pg. 6-3)

The Suburban Policy Area is defined on the north by the Potomac River and on the south by Braddock Road. Its eastern edge is the Fairfax County line, and its western edge begins at the Potomac and follows a southerly path along the Goose Creek just east of Leesburg, the Goose Creek and Beaverdam Reservoirs, and a combination of property lines, roads, the power line easement, and Washington Dulles International Airport's 65 Ldn (day-night average noise level) noise contours. (See Airport Ldn Contours Map, pg. 5-43)

The following data reflect the rapid transformation of the Suburban Policy Area during the 1990s:

- Building permits were issued for more than 25,000 dwelling units, about 75 percent of the total issued Countywide.
- The population grew from 46,800 to more than 106,500 – an increase of 128 percent.
- Nonresidential space in the Suburban Policy Area tripled to nearly 25 million square feet.

In the Suburban Policy Area, there is the potential for 44,726 additional housing units, including 27,145 units in the pipeline. It is anticipated that by the end of the twenty-year planning period, 40,112 housing units will have been absorbed, and a total of 80,298 housing units will exist. At that time, the Suburban Policy Area is projected to have a population of 209,053 persons, an increase of 96 percent over the 2000 population estimate. Future residential development will be primarily at suburban densities, with greater requirement for open space. Small pockets of higher-density housing are planned along major transportation corridors or in conjunction with town centers or major employment centers.

The Suburban Policy Area has significant development potential in land zoned for business uses. Existing zoning would allow an additional 120 million square feet of office and industrial construction, which should accommodate anticipated business growth well beyond the planning horizon. However, the County must continue to monitor the land area available for business land use expansion to ensure an adequate supply for continued economic development in and around the following major office and industrial areas:

- The Washington Dulles International Airport area along Route 606 and Route 50 and within the airport noise impact area;
- The Route 28 Highway Transportation Improvement District;

- The eastern end of the Dulles Greenway, east of the Route 659 interchange;
- The Route 7 corridor areas planned for Keynote Employment; and
- The eastern portion of the Leesburg Joint Land Management Area west of Goose Creek.

Land Use Pattern and Design

As the primary location for suburban-scale residential and nonresidential development, the manner of growth and redevelopment in the Suburban Policy Area is of vital importance. The Plan anticipates that there will be four distinct communities within the Suburban Policy Area, separated from one another by associated Green Infrastructure components and major roads. The Plan introduces the concept of Community Plans that will guide the remaining build-out of Ashburn, Dulles, Potomac, and Sterling. The County's goal is that the principles of Smart Growth and revitalization will guide the build-out and revitalization of the Suburban Policy Area through the detailed planning of the four communities. All future development applications in the policy area will be reviewed in the context of the four large communities: Ashburn, Dulles, Potomac, and Sterling. The four communities' boundaries are as follows (see Suburban Community Boundaries Map, pg. 6-5):

- The **Ashburn Community** stretches from the Potomac River north of Lansdowne and south of the Broad Run watershed boundary near Red Hill Road, and to the west extends along the Goose Creek and Beaverdam Reservoir.
- The **Dulles Community** is bounded on the north by the Broad Run watershed boundary, on the south by Braddock Road, on the east by the Fairfax County line, and on the west by the relocated Route 659.
- The **Potomac Community** includes the area north of Route 7 to the Potomac River between the Fairfax County line and the Broad Run.
- The **Sterling Community** includes the area from the Washington Dulles International Airport north to Route 7 between the Fairfax County line and the Broad Run.

As each new development is absorbed into the Suburban Policy Area's built environment, it is important that it is viewed in the context of its larger community. New residential and non-residential projects should have a mix of complementary land uses and project designs that ensure the long-term sustainability, or environmental and economic health, of both the individual development and the broader community. In addition, the County seeks to answer the transit needs of the Suburban Policy Area along with its growing need for revitalization and redevelopment.

The County's vision for the Suburban Policy Area is that the four large communities increase in quality and become more distinct places. Policies below address ways to improve livability through (1) protecting and enhancing elements of the Green Infrastructure, including open space; (2) ensuring compatible and complementary infill development; and (3) revitalizing existing neighborhoods in a way that protects and enhances our existing communities.

All development and redevelopment, both residential and non-residential, will implement a conservation design approach. Conservation design places a priority on preserving both sensitive environmental and man-made elements of a site. Site development will take place around these elements, incorporating them into the design.

Land Use Pattern and Design Policies

1. The County's vision for the Suburban Policy Area is self-sustaining communities that offer a mix of residential, commercial, and employment uses; a full complement of public services and facilities; amenities that support a high quality of life; and a design that conforms to the County's Green Infrastructure and incorporates Conservation Design.
2. Suburban Policy Area communities will be developed as efficient, compact, mixed-use and pedestrian-oriented communities with a range of residential lot sizes, in accordance with the community design policies of this Plan, will provide a measurable standard open space (active, passive, and natural) as specified in the land use matrix, and will fully integrate the County's Green Infrastructure.
3. The County, in collaboration with other govern-mental agencies and the private sector, will ensure through a variety of measures that all public spaces in residential and commercial areas are pedestrian friendly. These measures may include the construction, improvement, and maintenance of public squares, parks, and pedestrian malls, and the attention to street design details such as landscaping, lighting, and provision of attractive street furniture.
4. The County will develop four Community Plans that will provide for the development of the Suburban Policy Area. The four communities are Sterling, Potomac, Dulles, and Ashburn, as shown on the Suburban Community Boundaries Map.
5. All new development proposals in the Suburban Policy Area will be designed using the "conservation design" approach as detailed in the *Revised General Plan*.
6. The development phasing plan for a mixed-use project will establish a build-out relationship between the residential and non-residential components of the project that is consistent with the County's goals for the project area.
7. Alterations to approved land use projects will conform to the land use and design goals and policies of the *Revised General Plan*.
8. For properties up to 50 acres outside of Keynote Employment designations, the land use mix attributed to the various land uses may not be achievable due to the small size of the parcel. In such cases, an applicant for rezoning may vary from the land use mix specified in the Plan by showing that an alternative is more appropriate to the specific site. This can be accomplished by providing the County with a survey of land uses within a 1,500-foot radius of the site.
9. Development proposals proceeding through the legislative and site planning process will conform to the County's community design guidelines. The design guidelines will be implemented as a part of legislative applications (e.g., rezonings and special exceptions) and incorporated into regulatory documents such as the Zoning Ordinance, Facilities Standards Manual (FSM), and Land Subdivision and Development Ordinance (LSDO) where applicable.
10. To protect and enhance the historic character and cultural importance of the historically significant areas in the Suburban Area, the County shall work with the local communities towards the designation of County Historic and Cultural Conservation Districts. Other historically significant areas within the Suburban Area shall be identified and protected/enhanced. Pedestrian access to and from existing and future neighboring residential communities also shall be encouraged for any new development.
11. The County will discourage strip development of any type and accordingly will develop zoning performance standards to discourage this pattern of development.

12. The County will pursue state enabling legislation for the establishment of a Transfer of Development Rights (TDR) Program within suburban communities to assist in the development of open space.
13. There will be one (1) Transit-Oriented Development (TOD), one (1) Transit-Related Employment Center (TREC), one (1) Urban Center in the Suburban Policy Area, and up to three (3) Mixed-Use Office Center areas in the Route 28 Corridor. Town Centers may be considered for development west of Route 28 or south of Route 606 in the Suburban Policy Area.
14. Undeveloped or minimally developed parcels shown on the Land Use Map for non-residential uses but zoned residential will be remapped to a corresponding non-residential district. Likewise, undeveloped or minimally developed parcels shown on the Land Use Map for residential uses, will be remapped to a density of 1.0 dwelling units per acre, if not currently zoned at a higher density. (Also see Economic Development Policy 15, page 4-10.)

A. Four Distinct Communities

The County recognizes that the Suburban Policy Area comprises four distinct communities that are separated from one-another by components of the Green Infrastructure and by major roads. As a priority, the County will work with residents and business leaders to develop individual, detailed Community Plans to address particular needs and that will guide the build-out of each of these communities during the next twenty years. Different detailed planning approaches will be required because of the differences in the development of the four communities. For example, revitalization and redevelopment may be emphasized in the Sterling and Potomac Communities, while the Ashburn and Dulles communities continue to develop through new projects.

The Community Plans will be official elements of the County's Comprehensive Plan and will provide policy guidance to achieve the following objectives:

- The communities will be distinct, separated by greenways or natural buffers, as well as major road corridors and will protect sensitive environmental areas.
- All communities should seek to provide a full range of housing types, and provide for a diverse, stimulating social, cultural, recreational, and spiritual environment. Communities west of Route 28 or south of Route 606 may have a recognized Town Center.
- The County will create a program for the revitalization of older neighborhoods that will provide incentives for new investment, upgrading of facilities, and adaptive reuse of non-residential structures.
- The communities will comply fully with the County's Green Infrastructure policies, meet the applicable standards for open space, and have a network of greenways and trails.
- The County's service levels and plans for all public facilities will be fully implemented with appropriate site locations.
- Necessary school facilities will be provided at conveniently located sites to meet the educational needs of the communities and to ensure that school clusters are consistent with community boundaries.
- The internal transportation systems will be efficient, safe, pedestrian-friendly, and provide for alternative modes of transportation.

Pending completion of the Community Plans, the *Revised General Plan's* policies related to incorporating infill parcels into these communities will apply.

Communities Policy

1. As part of the Community Plan process, the County will plan and implement a pedestrian and bikeway network to link the residential, employment, and transit station areas of the four Suburban Policy Area communities, and so far as possible, connect the system to those of adjoining jurisdictions.

B. Green Infrastructure

The Suburban Policy Area has a rich cultural heritage and is the site of important components of the County's Green Infrastructure. The County's strategy is to protect its existing elements and to recapture elements where possible. Existing elements of the Suburban Policy Area's Green Infrastructure include the following:

- An easement along the policy area's segment of Goose Creek, a state scenic river;
- The Northern Virginia Regional Park Authority's 838-acre Algonkian Regional Park, which has 1.6 miles of frontage on the Potomac River and features a 2-mile walking trail, recreational facilities, and riverfront vacation cottages;
- The County's parks and recreation system featuring the 367-acre Claude Moore Park, community centers in Arcola and Sterling, and numerous small parks and recreational facilities that are owned, leased, or maintained by the County;
- Athletic fields adjacent to the County's schools;
- Thousands of acres of open space in planned communities that are used or maintained by homeowners' associations (HOAs);
- Several public or private golf courses that are built or planned; and
- Cultural amenities including Northern Virginia Community College's 200-seat auditorium and art gallery, as well as Dulles Town Center's tree-lined town green with recreational facilities.

The Green Infrastructure policies outlined in Chapter Five of this Plan apply to the Suburban Policy Area. The County places a high priority on implementing Green Infrastructure policies in the Suburban Policy Area, recognizing that the development process of the past twenty years has not met the open-space needs of the expanding suburban population. By implementing conservation design, it is the County's desire to capture, recapture, and protect those natural and man-made elements that provide scenic beauty and cultural and recreational amenities for a community. Among the open space priorities as the County implements this *Revised General Plan's* Green Infrastructure policies are the following:

- Preservation of the 7,500 acres of floodplain along the Potomac River, the Broad Run, and a network of smaller tributaries in eastern Loudoun;
- Preservation of the remaining archeological sites of the Native American tribes;
- Support of the regional initiative to establish a "Potomac Heritage National Scenic Trail" along the banks of the Potomac River in Virginia, Pennsylvania, Maryland, and Washington, D.C.;
- Protection of the historical assets in the Village of Old Ashburn and the Village of Old Sterling through architecturally compatible rehabilitation and adaptive re-use of historic structures and the sensitive development of architecturally compatible infill projects;

- Protection of the 19th-century Ashburn Presbyterian Church, which is on the National Register of Historic Places;
- Recapture of the Green Infrastructure and wildlife habitat along the Sugarland Run and associated tributaries; and
- Reforestation and re-naturalization of significant woodland and wildlife habitat areas.

Green Infrastructure Policy

1. A distance of 1,000 feet east from the Beaverdam and Goose Creek reservoirs is designated as a priority open space area for the voluntary creation of a green-belt. This voluntary greenbelt extends 1,000 feet beyond the 300-foot no-build buffer established to protect water supply reservoirs. This greenbelt will be created through various mechanisms such as land donations, conservation easements, purchase of development rights, and other land conservation mechanisms. Such additions also will be considered as fulfilling open space requirements. (See Green Infrastructure Map, pg. 5-3)

C. Open Space

Open space is a critical component of a healthy, vibrant community. It can provide the connections between neighborhoods that enhance the sense of community. The Suburban Policy Area will incorporate a broad array of open-space features at both the community and neighborhood scale. Such areas may be in the form of woods, wet ponds, neighborhood and community parks, community gardens, athletic fields, tot lots, trails, streetscape areas, and other natural or man-made features that function as amenities for a planned development's residents and employees.

Open space not only lends scenic beauty, it also provides space for recreational activity. It is important that active recreation open space be readily accessible (i.e., pedestrian-oriented) and, when it is located in a residential area, commonly owned, either by a homeowner's association or by the public. Neighborhood parks should be numerous and easily accessed by the pedestrian and bicyclist. The County's overall goal is for open space to be within 1,500 feet of every residence in the Suburban Policy Area.

Greenbelts, areas of natural open space, are desired at the perimeter of the four communities and to separate the Suburban Policy Area from the Beaverdam and Goose Creek Reservoirs. Greenbelts provide a natural separation of communities. Greenways, corridors of natural open space usually along rivers or streams, are desired along the Goose Creek, Broad Run, Sugarland Run, and the Potomac River in the Suburban Policy Area.

Other open areas, such as perimeter buffers, stormwater management facilities, and leftover edges and corners of properties, do not meet the County's objective of providing usable open space. They will not meet more than 25 percent of the open-space requirements of new developments, unless they are part of a qualified open-space amenity. In some cases, such as in the development of small infill lots, 50 percent of the open space may be preserved off-site. In these cases, a contribution to a regional park or larger athletic facility may be more desirable to the County and its residents than small fragments of open space that would be accommodated within the development.

Open Space Policies

1. In Residential Areas, a mix of open space will be provided. This mix will include active and passive and/or natural open space areas as appropriate to the scale and location of the site. Types of active recreation open space include ballfields, tennis or basketball courts, swimming pools, tot lots, golf courses, dog parks, and other areas for recreational sports or games. Types of passive open space

include trails (hiking, biking, walking, or equestrian), picnic, camping, hunting, or fishing areas. Natural open space is land left in a mostly undeveloped state including forests, meadows, hedgerows, and wetlands.

2. Business and Industrial land use areas will provide open space of the following types: open space in its “natural” state, such as forests, wetlands, or meadows; trails and trail connections; water features or amenities. The placement of certain active recreational facilities such as lighted ballfields in Business and Industrial land use areas will be encouraged. Business and Industrial land use areas will provide public and civic space of the following types: plazas, public art, entrance features. The required open space and public & civic space will conform to the percentages required for each category of suburban area development as established in the relevant matrix.
3. Interior open space will account for at least 75 percent of the required open space in residential areas. Thus, neither the required buffer areas nor “leftover spaces” and parking and street landscaping can account for more than 25 percent of the open space requirement.
4. All dwelling units will have an open space area (active, passive, or natural) located within 1,500 feet.
5. All active recreation open space will be readily accessible to pedestrians and cyclists by sidewalk, path, trail, and/or bike lane.
6. Fifty percent (50%) of the open space requirement may be satisfied by the area of River and Stream Corridor Overlay District (RSCOD).
7. The entire area of the RSCOD on a given parcel will be protected in accordance with River and Stream Corridor Resource policies, regardless of the amount applied to the open space requirement of the land use mix.
8. Residential developments in the Suburban Policy Area must have 30 percent of the land designated as open space. Up to 50 percent of the required open space, excluding RSCOD, may be obtained offsite within the same suburban community. Offsite open space can include priority open space areas, green-belts, and components of the green infrastructure.
9. Areas included on the following list will fulfill the open-space ratio requirement of the land use mix defined for residential communities:
 - a. Community parks that are at least three acres in size;
 - b. Neighborhood parks that are at least 20,000 square feet in size;
 - c. Pocket parks, landscaped gardens, and greens that are at least 2,500 square feet in size;
 - d. Linear path systems that connect to off-site path systems. Multi-modal path systems will conform to American Association of State Highway and Transportation Officials (AASHTO) standards;
 - e. Required perimeter buffers (not to comprise more than 25 percent of the open space);
 - f. Community gardens at least 2,500 square feet in size;
 - g. Tot lots that are a minimum of 5,000 square feet in size; and
 - h. The RSCOD that does not comprise more than 50 percent of the required open space in a community;
 - i. Equestrian trails;
 - j. Water features such as ponds and lakes that are wet year-round. Storm water management

facilities will not be included unless they are developed as year-round amenities. (e.g., with gazebos, picnic areas, or walking paths added).

10. No buffer standard reductions will be permitted without substitution for other open space on an acre-to-acre basis.
11. Development will be clustered away from the Beaverdam and Goose Creek reservoirs to help establish the primary greenbelt area and to help create a contiguous network of open space as part of the Green Infrastructure.
12. The County will support and encourage private contractual exchanges of density within each of the four Suburban Communities to assist with the development of open space.
13. Density transfer, both by voluntary action and through the Open Space Preservation Program will be promoted within each of the four communities. All residential rezonings will be considered for voluntary participation in an open space preservation program.

D. Water and Wastewater

The Loudoun County Sanitation Authority (LCSA) will continue to be responsible for the provision of public water and sewer service in the Suburban Policy Area. Specific policies regarding water and wastewater for the Suburban Policy Area are contained in Chapter Two.

E. Transportation

The Suburban Policy Area (see Road Surfaces Suburban and Transition Policy Areas map, pg. 6-13) is the heart of the County's population, employment, and commercial centers. Moving people among these land uses smoothly is the hallmark of an effective transportation system. The County places a high priority on the establishment of a safe, convenient, and environmentally sound transportation system for movement of people to and from the Suburban Policy Area as well as within it. The County's suburban transportation network is multi-modal: Routes 7, 28, 50, and 267 provide the backbone of the suburban road network; the W&OD Trail is the spine of the bicycle network; residential and commercial developments provide sidewalks and biking/walking trails to encourage biking and walking trips; and Bus Rapid Transit is expected to be implemented along the Dulles Greenway in the 2003/2004 timeframe with a conversion to rail service by 2010. These transportation networks link a variety of land uses. How the County plans communities will invariably affect transportation needs.

With the advent of transit, it is important that the County plan land uses accordingly. In addition, mixed-use communities should provide pedestrian-scale environments that promote walking and bicycling, which reduces automobile trips. The County will produce a bicycle and pedestrian network through a subsequent planning process for recreation and as a transportation alternative. This network should connect key centers of employment, commerce, service, and residential development. The County will continue to seek federal, state, and local funds to improve the existing transportation network - to become truly multi-modal.

Suburban Transportation Policies

1. The *Revised Countywide Transportation Plan* (CTP) provides additional transportation policy direction for the transportation network in the Suburban Policy Area. The hierarchy of roads will be amended to reflect the scale and function of its associated land use.
2. The development of High-Density Residential Areas and Town Centers will be phased to achieve acceptable levels of transportation service through the available mix of transportation modes.
3. Residential, office, institutional, civic, and retail areas in the Suburban Policy Area (schools,

universities, shopping centers, employment centers, parks, libraries, community centers, and other heavily visited public buildings) should have convenient access by foot and bicycle.

F. Infill, Revitalization, and Redevelopment

Due to its rapid development during the past two decades, the Suburban Policy Area should approach an initial build-out by 2020. The County anticipates that the majority of land use applications in this policy area will be for infill, revitalization, or redevelopment projects within established communities. Infill projects are key to completing larger community development patterns. Redevelopment and revitalization of aging or neglected areas of the Suburban Policy Area are essential to the general “health” of the area. An area’s loss of vitality results in significant public costs due to abandonment of older public infrastructure and declining residential and non-residential property values.

Infill development is the establishment of a new land use on a site that may be undeveloped or underutilized but is located within an established, stable development where public facilities such as roads, water, sewer, and general services are available. A well-conceived strategy for the development of infill lots will help reduce the adverse impacts that result when two different land uses are adjacent to each other and allow uses complementary to those found on adjacent, developed sites. When infill development occurs between disparate uses, the site should be developed to blend in or transition between uses with ample setbacks and buffering. Factors to be considered in developing infill parcels include the size of the parcel relative to the sizes of adjacent parcels; site access as it relates to regional access; community open space and civic area needs; impacts on the site due to existing or planned regional transportation facilities; utility connections; and the relationship to surrounding land uses and the physical location of those uses on the adjacent sites.

The County will not allow the artificial creation of infill development parcels. A property owner will not be permitted to reserve part of a larger tract of land in order to take advantage of any land use intensity that may accrue to the small piece if it were considered at a later date for infill development. If that is attempted, the subordinate parcel will be developed as though it were part of the regional context, clearly relating in use and intensity to the land use pattern established by the development of the larger tract of which it was once a part.

As developments age and community needs shift, revitalization is necessary in communities. Those needs will be identified and planned for in the Community Plan process. Needs might include open space, pedestrian or bicycle connections, traffic calming, stormwater management improvements, or other issues. In keeping with the intent of the *Revised General Plan*, the recapture of Green Infrastructure will be a priority in all redevelopment strategies.

Infill, Redevelopment, and Revitalization Development Policies

1. The County will evaluate proposed infill development applications during the legislative and/or regulatory process based on how the proposed use functions on the site relative to the established development pattern, rather than simply based on the use itself. Evaluation criteria established to determine the relationship of surrounding uses with the proposed infill use will include the following:
 - a. Size of the infill parcel relative to surrounding parcels,
 - b. Residential densities established on adjacent parcels,
 - c. Ability of the infill parcel to provide a compatible site design with or without buffering from the existing development pattern,
 - d. Amount of open space and impervious surface,

- e. Use intensity,
 - f. Development pattern and scale,
 - g. Road and pedestrian network, and
 - h. Impact of noise and light generated on the site.
2. Redevelopment of existing uses will be based on the availability of adequate public facilities, transportation facilities, and infrastructure. The County desires the assemblage of small, adjacent under-utilized sites to achieve a consistent and compatible development pattern. Established residential communities will be protected and enhanced through revitalization plans.
 3. Infill projects that propose substantially different uses from one or more of the adjoining properties will provide for an adequate transition through buffering, fencing, and setbacks to mitigate any negative impact.
 4. The Zoning Ordinance will promote the development of interim uses on vacant infill properties (i.e., which are initially interim but may become permanent such as community gardens, playgrounds, park-and-ride lots, and farmer's markets), provided that these uses are compatible with the surrounding neighborhood.
 5. The County will ensure that new development projects provide inter-parcel vehicular and pedestrian access opportunities to adjacent vacant parcels so that future infill projects may be efficiently connected and served.
 6. The County will work actively with residential development applicants to facilitate the integration of proposed homeowner's associations (HOAs) into an adjoining HOA to maintain economies of scale and to augment the availability of amenities.
 7. Higher density development as defined in the *Revised General Plan* will occur in the Suburban Policy Area in the Transit-Oriented Development, Urban Center, in the Town Centers, or "community cores", of the communities west of Route 28 or south of Route 606, and the Mixed-Use Office Center areas in the Route 28 Corridor. These areas will have the highest densities in the Suburban Policy Area. Town Centers should be identified through a community planning process.
 8. The four Community Plans will identify the needs of each specific community such as where and what type of traffic calming is needed, and target specific areas for revitalization and redevelopment.
 9. Redevelopment and revitalization plans will include the recapture of the Green Infrastructure through methods such as the PDR program; the strategic purchase of infill sites for parks, athletic fields, and open space; and assisting homeowners' associations to purchase open space.
 10. To provide for the sensitive redevelopment of existing areas to new uses, the County desires that small lots and tracts be consolidated into larger parcels that can support a more comprehensive design and servicing approach.
 11. The County will direct public investment and resources and give priority to the redevelopment and enhancement of existing infrastructure, capital facilities, and services. The County also will implement an incentive program for redevelopment of the above.
 12. The County will provide incentives and resources for the revitalization of established neighborhoods to preserve the quality of life in these areas through the provision of community amenities, such as, but not limited to, pedestrian/bicycle facilities, traffic calming, street lighting, sidewalks, and improved retail and commercial establishments.

13. The County will direct public investment and resources toward completing and recapturing the Green Infrastructure in the developed areas of the four communities and providing alternative transportation modes within the four communities.
14. Loudoun County will exercise the power of eminent domain only for the development of public facilities, as defined in the State Code.

Land Use Categories

The Suburban Policy Area has four primary land uses: Residential, Business, Industrial, and Retail (see Planned Land Use Map, pg. 7-23). Retail policies are established in the *Countywide Retail Policy Plan* amendment. Within these primary land uses are subcategories. The County's overall land-development strategy is to encourage compact, mixed-use developments that provide people with the opportunity to live, work, recreate, and shop in a pedestrian-friendly environment. The exceptions are for Keynote Employment areas and General Industrial areas in the County. Because much of the Suburban Policy Area is already developed, this Plan envisions that new projects will be modest in scope and therefore will be evaluated based on their compatibility with the larger community of which they will be a part. The land use categories and policies guiding their development are described below and summarized in the matrix on pg. 6-33.

A. Residential

Residential land uses include Residential Neighborhoods and High-Density Residential uses. Town Centers, the key commercial component of the four Suburban Communities, also are detailed in this section. Housing is the principal function in Residential Neighborhoods, but business and light/flex industrial uses also are permitted to provide support services and local employment opportunities to residents. The mix of uses at the core of larger Residential Neighborhoods should include retail and personal services, public and civic uses, and elements of the Green Infrastructure. Smaller neighborhoods will focus on a public green or park, civic buildings such as a church or community center, or a small neighborhood commercial center.

Residential design features must include efficient and compact site and roadway layout with adequate open space (active, passive, and natural), streetscapes that include sidewalks, street trees, pedestrian-scale lighting, pedestrian and roadway linkages to other neighborhoods and communities, and the full protection and incorporation of the Green Infrastructure. Such neighborhoods will incorporate a mix of housing types and lot sizes to provide options for a range of lifestyles and incomes, as well as a mix of land uses to allow residents the opportunity to work and shop nearby.

In larger Residential Communities made up of several neighborhoods, the focus will be a compact Town Center comprising residential uses, a commercial component larger than one that would serve a single neighborhood, plus public and civic uses, parks and greens.

General Residential Policies

1. The *Revised General Plan* indicates the preferred location for Residential Areas on the Land Use Map. These locations may be modified when Community Plans are developed.
2. The County may permit residential rezonings at densities up to 4.0 dwelling units per acre in Residential Neighborhoods and densities between 8.0 and 24.0 dwelling units per acre in High-Density Residential Areas, in accordance with the policies specific to each type of Residential land use.
3. Residential development will continue to be located outside the adopted and projected Ldn 65+

(day/night average noise level) noise zone for Washington Dulles International Airport and the Leesburg Executive Airport. Residential development within the Route 28 Highway Improvement Transportation District will be limited to three (3) specific locations. These areas include the Old Sterling planning area, the Oak Grove area, the Eden Tract and Loudoun Village properties, and areas designated as high density residential on the Planned Land Use Map. Areas designated high density residential within the Route 28 HITD will be compatible with the densities and unit types of surrounding neighborhoods. Specific densities for the high density residential areas are as follows:

- a. Victoria Station-up to 10 dwelling units per acre
- b. Pearson Reserve-up to 8 dwelling units per acre

Furthermore, the identification of specific properties precludes the use of other *Revised General Plan* policies, which would permit the consideration of residential development on a case-by-case basis.

1. Residential Neighborhoods

Residential Neighborhoods are the largest land use component of the Sterling, Potomac, Ashburn, and Dulles Communities. The long-term livability of neighborhoods requires a systematic approach to incorporating them into the overall design of the larger communities, while retaining their distinct neighborhood identities.

Residential Neighborhoods should have a variety of housing types and lot sizes, and they are to be developed in accordance with design guidelines and performance standards for efficient site layout, a pedestrian-friendly scale, adequate open space (active, passive, and natural), and the protection and incorporation of the Green Infrastructure. Design guidelines included in the implementation section of this Plan outline key design features and opportunities to be addressed in these developments (See Chapter Eleven).

Residential Neighborhoods Policies

1. New Residential Neighborhoods will develop at densities up to 4.0 dwelling units per acre, depending on the availability of adequate roads, utilities, and the provision of a full complement of public services and facilities.
2. The land use mix (measured as a percentage of the land area) in a Residential Neighborhood generally will comply with the following ratios:

Land Use Category*	Minimum Required	Maximum Permitted
a. Residential	30%	60%
b. Office & Light Industrial	0%	20%
c. Public & Civic	10%	No Maximum
d. Public Parks & Open Space	30%	No Maximum

* Retail Policy guidance provided in *Countywide Retail Plan*

3. Residential Neighborhoods will incorporate fully open space at a minimum of 30 percent of the gross acreage of the property. In both residential areas, no more than 50 percent of the required open space may be located in the RSCOD.
4. Residential Neighborhoods will exhibit the following design characteristics desired by the County:
 - a. Compact site layout to reduce trips within the neighborhood, facilitate alternative forms of transportation, preserve the Green Infrastructure, and result in reduced transportation and utilities infrastructure costs;

- b. Pedestrian-scale streetscape including such features as street trees, sidewalks along all street frontage, and street lighting;
- c. A predominantly interconnected street pattern with inter-parcel connections;
- d. A combination of neighborhood parks, squares, and greens located throughout the neighborhood within 1500 feet of all residences, and a formal civic square or other public space located in conjunction with a civic facility, Neighborhood Center, or other use, to create a focal point for the community;
- e. The location of public and civic uses such as churches and community centers in prominent sites to act as landmarks within the neighborhood;
- f. Off-street parking lots located to the rear of civic and business uses to ensure the building is the prominent sight from the street;
- g. On-street parking that may be credited toward meeting residential parking requirements; and
- h. A variety of lot sizes.

2. High-Density Residential Uses

High-Density Residential uses accommodate a scale of human activity that is needed to develop viable, mixed-use communities and to implement key County objectives including the development of mass transit, provision of affordable housing, preservation of open space, and efficient use of public facilities and services. High-Density Residential uses will develop only in a limited number of locations that include designated areas along the Dulles Greenway, within the County's Urban Center, in Town Centers, and as a component of mixed-use Business land use areas. Densities will be highest in the Dulles Greenway corridor, where transit is anticipated. Development within Transit-Oriented Developments (TODs) along the Dulles Greenway is governed by the policies in the TOD section of this Plan. The Dulles Greenway corridor is defined as 1.5 miles on either side of the Dulles Greenway.

High-Density Residential Use Policies

1. High-Density Residential uses will include residential densities between 8.0 and 24.0 dwelling units per acre in mixed-use areas of the Dulles Greenway corridor, in the Urban Center, and densities between 8.0 and 16.0 units per acre in other mixed-use Business developments based upon the availability of utilities, transportation facilities, public facilities, participation in open-space preservation efforts, and conformance to the community design and growth management policies of this Plan.
2. Properties proposed for a rezoning to High-Density Residential uses may be located only in the following areas:
 - a. Areas designated as High-Density Residential uses on the Land Use Map.
 - b. In conjunction with an Urban Center or Town Center in accordance with policies applicable to each center;
 - c. As part of a Regional Office or Light Industrial use in accordance with policies applicable to each use; and
 - d. In other areas specifically identified in the *Revised General Plan* or Community Plans.

- The land use mix (measured as a percentage of the project land area) in a High-Density Residential area generally will comply with the following ratios:

Land Use Category*	Minimum Required	Maximum Permitted
a. High Density Residential	40%	60%
b. Office, Light Industrial	0%	20%
c. Public & Civic	10%	No Maximum
d. Public Parks & Open Space	30%	No Maximum

* Retail Policy guidance provided in *Countywide Retail Plan*

- High-Density Residential policies will be updated by Community Plan policies.

3. Town Centers

The Plan anticipates that communities west of Route 28 or south of Route 606 may have one or more Town Centers that serve as the “downtown” or community core of the communities. Town Centers must be compact and designed to accommodate pedestrian and vehicular traffic with a full complement of services and amenities. Even though the potential exists to develop the Town Center and associated neighborhoods in phases, an overall concept plan should be developed so the interrelationship of its parts (residential, commercial, office, civic, public open space, and transportation network) can be evaluated. A key element of the Town Center’s design is its emphasis on pedestrian movement versus automobile movement, through the use of a grid street pattern and pedestrian-scale shops. Town Center development also should include a provision for transit facilities or stops.

Town Center Policies

- A Town Center functions as the “downtown” of the local community with a mix of residential and business uses in a compact setting. The communities west of Route 28 or south of Route 606 may have Town Centers. The locations of Town Centers should be determined through a community planning process or established during the consideration of a land development proposal that includes a community outreach and input process.
- The Town Center will provide for a mix of land uses including dwellings, commercial and office uses, personal and household service establishments, institutional uses, public facilities, parks, playgrounds and other similar uses meeting the needs of the adjoining neighborhoods.
- The Town Center will range in size between 30 and 60 acres.
- The land use mix (measured as a percentage of the land area) in a Town Center generally will comply with the following ratios:

Land Use Category*	Minimum Required	Maximum Permitted
a. High Density Residential	25%	40%
b. Commercial Retail & Services*	20%	45%
c. Regional Office	10%	25%
d. Overall Business Uses (b & c combined)	30%	50%
e. Public & Civic	10%	No Maximum
f. Public Parks & Open Space	10%	No Maximum

* Retail Policy guidance provided in *Countywide Retail Plan*

5. Housing densities from 8.0 to 16.0 dwelling units per acre will be permitted in a Town Center, contingent upon the availability of utilities, roads, and public facilities and in conformance with the community design and growth management policies of this Plan. The Residential component will be subject to the design guidelines outlined in the Residential policies.
6. Business floor-area ratios will be sufficient to permit maximum use of small lots and the development of structures that support ground-floor shops and upper-level residential and office uses.
7. An overall concept development plan will be required in sufficient detail to allow evaluation of the inter-relationship of the Town Center's parts (residential, commercial, office, civic, public open space, road network design, and other components).
8. Approval of a request to rezone property to permit a Town Center will be contingent on the provision of a full complement of public facilities and services, the adequacy of roads and utilities, limited impact on existing neighborhoods, and compliance of the proposal with the community-design policies and guidelines of this Plan.

B. Business

Business land use policies address the location and character of large-scale office and light-industrial uses in the Suburban Policy Area. The County encourages a mix of uses in most of its office and light-industrial business developments. In addition to offices, Business land uses generally may feature housing and/or commercial/retail uses, and all of the uses have a component of public/civic uses and parks and open space. A mix of uses creates an environment where individuals not only can work, but where they can live and have convenient access to services, shops, and recreation. Policies guiding retail development are found in the *Countywide Retail Policy Plan Amendment*. Policies in Chapter Eleven of this Plan guide the design of these developments.

Business land uses include Urban Centers, Keynote Employment Centers, Regional Offices, Light Industrial uses, and Transit Nodes. Generally, such regional uses should be near the Washington Dulles International Airport, the Route 28 Highway Transportation Improvement District, the Dulles Greenway Corridor, and the Route 7 Corridor. This section also addresses parking policies relating to Business land uses.

General Business Land Use Policies

1. Business land uses will be located in accordance with the Land Use Map and the goals and policies of this Plan.
2. Office and Light-Industrial uses requiring markets outside the immediate neighborhood should locate in compact nodes at intersections of major collector and arterial roads in locations designated on the Land Use map.
3. In evaluating Business land use proposals, the following will be considered:
 - a. The market area and population threshold (which should be large enough for the proposed business use to financially support itself and not depend upon that portion of the population that is already served by existing and proposed competing projects);
 - b. Steps taken to mitigate the impact of parking, signs, and other associated activities on the surrounding community;
 - c. The available capacity of utilities and roads;

- d. The potential fiscal and environmental impacts of the proposal;
 - e. The relationship of the proposed use to the land use and community design policies of the Plan; and
 - f. Other matters that may determine how the proposal relates to County policy.
4. All Business land use developments will be located in planned-development zoning districts to ensure the design and compatibility of new development with adjacent land uses and allows flexibility in site design.
 5. Business land uses will possess adequate on-site parking, storage, and loading areas as well as landscape screening of these functions from surrounding neighborhoods. Designers should seek to reduce the potential impact of building size, exterior cladding of the building, signs and other features of an employment use that may create negative visual impacts on the surrounding community. Pedestrian and vehicular circulation systems in and around the business uses will form a safe and convenient network. Outdoor lighting will be designed for effective nighttime use of the facility and to reduce off-site glare to a minimum.
 6. Access to Business land use areas will provide safe and efficient movement of traffic into the centers, without impeding traffic movements also on the adjacent roadways. Generally, entrances to and exits from the centers will be made from the minor arterials serving the center to cause the least disruption to traffic on the major arterials.
 7. The County's CLI commercial zoning district allows for a wide variety of commercial uses, which generate high traffic volumes and which do not promote the coordinated and efficient land use or traffic pattern envisioned by the County for the U.S. 50 Corridor. Therefore, the County will consider alternative methods for addressing the conformance issue, such as modification of the by-right and special exception uses provided in the district to those more appropriate to achieve the objectives of the Plan.
 8. Business land use policies will be updated by Community Plan policies.
 - 8a. The County may choose to apply the Business Land Use, Office and Light Industrial Land Use mix ratios on a sub-area wide basis for the sub-area depicted on the CPAM 2004-0008 map (dated August 31, 2004) when such applications further the business and land use goals of the *Revised General Plan*.
 - (1) Development proposals requesting a sub-area based application of the land use mix should include the following: (i) a sub-area concept plan that demonstrates how the Plan's land use mix goals for either a Regional Office or Light Industrial community are achieved, and (ii) an inventory of existing land uses to be considered as part of the land use mix calculations. An individual project that would consume all of a single land use from the land use matrix is discouraged.
 - (2) Development proposals requesting a sub-area based application of the land use mix should demonstrate compatibility with the Planned Land Use community type (Regional Office or Light Industrial) that exists or has already been proposed.

Arcola Area/Route 50 Corridor Plan

Introduction

The following policies and Arcola Area/Route 50 Land Use Map are intended to implement the recommendations of the Route 50 Task Force. The Route 50 Task Force, consisting of members from various organizations including the County's Economic Development Commission, the Loudoun Convention and Visitors Association, the Metropolitan Washington Airports Authority, property owners, area residents, developers and representatives of heritage and cultural resources groups, was formed to address land use and transportation issues along the Route 50 corridor and make recommendations that would help create an attractive gateway to Loudoun County. This gateway is intended to recognize and strengthen the area's heritage and cultural resources, promote economic development and tourism, and contain development, transportation, and infrastructure improvements that are tailored to the unique and pressing needs of the area. The Route 50 Task Force submitted their Final Report to the Board of Supervisors on July 19, 2005.

The Route 50 corridor is planned for a modified Business and modified Industrial Community. The policies guiding the Business and Industrial Communities in the Route 50 Corridor are intended to be supplemental to the policies governing Business and Industrial Communities countywide.

General Policies

1. The County anticipates the development of Business and Industrial communities in the Route 50 corridor.
2. Destination retail uses are limited to a portion of the planned Business area on the north side of the Route 50 corridor except as permitted in hybrid retail centers (See Arcola Area/Route 50 Corridor Planned Land Use Map).
3. The County anticipates the revitalization of the Village of Arcola through a mix of uses that will function as an alternative shopping and working environment to the nearby planned Business uses. New residential uses within the Village of Arcola and the Village Perimeter Transition Area are permissible.
4. While the County will seek to maintain the viability of existing industries within the Village of Arcola and Village Perimeter Transition Area, new industrial uses requiring outside material, equipment storage, heavy equipment repair, and similar activities will be located outside the Village of Arcola and Village Perimeter Transition Area.
5. The County envisions a Village Perimeter Transition Area surrounding the Village of Arcola that provides a transition between the smaller scale uses and compact pedestrian-friendly design of the Village and the larger footprint retail and employment uses nearby.
6. The Arcola Area/Route 50 Corridor Planned Land Use Map provides additional direction for the transportation network within the corridor. Final alignments may be adjusted through the development review process provided the function and capacity of the system is not reduced.
7. New development will achieve and maintain acceptable levels of transportation service by completing the planned road network and supporting alternative transportation modes. It is anticipated that new road and transportation proffers will be provided in the initial phases of new developments.
8. The County supports the creation of a mixed-use business zoning district as a means to implement the policies of the Arcola Area/Route 50 Corridor Plan.

9. The County supports residential uses at a maximum of three stories in height.
10. All development proposals will conform to the Route 50 Entrance Gateway Guidelines.
11. Within the Route 50 Business Community, the development of new residential uses will be made contingent upon the prior or concurrent construction of light industrial or office uses to accomplish the following:
 - a. To maintain the office and light industrial uses as the predominant uses on the property during each phase of the development; and
 - b. To best balance the fiscal costs and benefits of the project.

Architectural Design Policies

1. The County shall develop general design guidelines to support architectural consistency throughout the corridor area to promote a sense of place and provide attractive areas for business and tourism opportunities.
2. The County shall encourage the submission of architectural guidelines for all new developments.
3. The County recommends the establishment of a Route 50 Architectural Review Advisory Board or Committee as part of the Route 50 Task Force to assist in developing and refining architectural guidelines for the Route 50 corridor.
4. The County will consider incentives for property owners to upgrade their buildings by incorporating recommended architectural treatments and features through the development of a Route 50 corridor improvement fund.

Landscaping Policies

1. To provide an aesthetically pleasing corridor, all properties along Route 50 will be developed with a unified treatment of setbacks and landscaping consistent with the landscaping guidelines established as a result of the Route 50 Task Force Report.
2. The County will consider providing incentives for property owners to upgrade their landscaping and/or provide landscaping easements on portions of their property for plantings by others. Incentives shall include but not be limited to:
 - a. Crediting landscape easements as open space for the purposes of meeting the land use mix.
 - b. Establishing a Route 50 corridor improvement fund, created by open space proffer contributions, to facilitate planting of areas that need assistance in upgrading or installing landscaping.

Economic Development Policies

1. The County encourages an economic development focus within the Route 50 corridor to include office, light industrial, industrial, retail and other tourism-related opportunities (such as restaurants and hotel accommodations).
2. Regional Office and Light Industrial communities will be the predominant component of Business areas. Development proposals will develop with office and/or light industrial uses to ensure the County attains the employment land uses envisioned for Business Communities.
3. The County encourages a Fiber-to-the-Premise infrastructure for developments that provide County residents with a “bundled” offering of services: internet, cable, and telephone service.

4. The County encourages higher Floor Area Ratios (FARs) for proposed non-residential development to ensure that land situated along Route 50 will build out to its full potential. The County discourages development of one-story buildings, which could limit future build-out potential, resulting in a loss of employment base and tax revenue.
5. The County will promote through its Economic Development Commission properties within the corridor to businesses seeking to enter or expand within the County.
6. The County supports the development of a cultural destination site at the Slave Quarters site in the Arcola area. The County envisions an expanded civic area along Route 606 Extended and Hutchison Drive to include cultural uses and the Slave Quarters site. County staff will coordinate with the Loudoun County Visitors Association (LCVA) when considering new development in this area.

Transportation Policies

1. Transportation improvements are to include a consolidation and reduction of access points along Route 50, upgraded interchanges, the development of north and south “collector” roads, and the realignment of future roadways.
2. To ensure a coordinated and efficient transportation system within the Route 50 corridor, the County recommends extensive cooperation among County transportation officials, Fairfax County, the Virginia Department of Transportation, Metropolitan Washington Airports Authority, and Route 50 corridor property owners.
3. The County recommends general alignments for the north collector road, portions of Tall Cedars Parkway and Defender Drive, Route 606 Extended (the west spine road) and existing Route 659 as shown on the Arcola Area/Route 50 Corridor Planned Land Use Map.
4. Right-of-way for the ultimate road section for Route 50 must be provided as each new development application for frontage properties is processed.
5. The County supports the development of alternative forms of transportation in the corridor such as transit and bicycle and pedestrian facilities.
6. Projected levels of service in all segments of the road network, including Route 50 will be level “D” in each phase of any new development.

Business Community

The County envisions a mix of uses in the modified Business area. While the predominant use is office and/or light industrial the area may also feature housing and/or commercial/retail uses with the exception of those areas designated Destination Retail Overlay and Hybrid Retail Center, which are prohibited by policy from having a residential component. The County may support additional commercial retail and services uses within the modified Business area when specific criteria is met. In addition, all of the uses will have a component of public/civic uses and parks and open space. Policies guiding retail development can also be found in the *Countywide Retail Policy Plan Amendment*.

Business Community General Policies

1. In the Route 50 Corridor, areas designated Business Community shall be subject to the policies and land use mix ratios of Chapter 6 except as modified or supplemented below.
2. In order to address the deficit of retail uses as well as the potential for tourism in the Route 50 corridor, the County will consider commercial retail and service uses in the Business Community that exceeds

the 10 percent retail maximum recommended in the Business Community policies of Chapter 6. The County will use the following criteria to evaluate proposals for increased retail uses in the Route 50 corridor:

- a. The retail use provides the goods and services needed by local employment and residential communities and/or supports the development of tourism in the Route 50 corridor;
 - b. The retail use is compatible with and can illustrate a coordinated design, transportation connection or other relationship with the surrounding communities that exist or have been approved;
 - c. The retail use does not access Route 50 directly;
 - d. The proposal provides appropriate and adequate transportation infrastructure; and
 - e. The proposal conforms with policies in the Retail Plan.
3. Proposals to rezone properties to provide residential development north of Route 50 will be evaluated according to how the proposed development integrates and supports the surrounding non-residential uses, minimizes conflicts with Dulles Airport operations and noise, provides or has convenient access to residential services and amenities, and mitigates transportation impacts. For Business Community parcels adjoining the noise contours, including those within the Village and Village Perimeter Transition Area, integrated uses shall be encouraged (such as but not limited to using “Main Street,” live/work, or office over retail designs). Structured parking is also encouraged. For Business Community parcels with Route 50 frontage, residential rear elevations shall not face Route 50.
4. While the business community policies may allow residential densities to be calculated based on land area impacted by noise contours, and while no residential units may be located in the 65 Ldn or west of the Village of Arcola and the Village Perimeter Transition Area, all residential proposals for the area immediately north of Route 50 will be limited to 14 units per acre on the land area occupied by residential use.

Industrial Community

Industrial uses north of Route 50 are intended to accommodate the continued expansion of the Chantilly Crushed Stone Quarry as well as attract airport-related and airport-compatible development. The County may support additional commercial retail and services uses within this area when specific criteria are met.

General Industrial Policies

1. In the Route 50 Corridor, areas designated General Industrial shall be subject to the policies and land use mix ratios of Chapter 6 except as modified or supplemented below.
2. The County will consider additional commercial retail and service uses in General Industrial developments within the Route 50 corridor that exceed the specified land use mix. The County will use the following criteria to evaluate proposals for increased retail uses in General Industrial areas:
 - a. The retail use provides the goods and services needed by local employment and/or supports the development of tourism in the Route 50 corridor;
 - b. The retail uses is compatible with the surrounding Industrial communities that exist or have been approved/proposed;
 - c. The retail uses does not access Route 50 directly;
 - d. The proposal provides appropriate and adequate transportation infrastructure; and

- e. The proposal conforms with policies in the Retail Plan.
3. The County will support industrial uses as the preferred use in designated Industrial Communities. Proposed uses shall ensure that their development does not jeopardize the viability of existing industries.
4. The County will protect the Chantilly Crushed Stone Quarry from incompatible neighboring uses by ensuring that encroaching new development does not hinder the operation of the quarry.

Hybrid Retail Center Policies

1. The County supports the development of retail uses in Dulles South that provide for convenience and routine shopping needs, generally defined as Service-Based Retail, and also provide some comparative and specialty goods, generally found in Destination Retail centers. A hybrid retail center can be developed north and south of the Route 50 corridor in the area designated Hybrid Retail Center on the Arcola Area/Route 50 Land Use Map. The County anticipates that other uses (such as office, light industrial, and civic uses) will also develop in the area designated for Hybrid Retail centers.
2. The Hybrid Retail Center may provide for convenience goods (such as food, pharmaceuticals), personal services (such as cleaners, banking), and a variety of merchandise (such as apparel, hardware, appliances). The Hybrid Retail center may include variety stores, discount and junior department stores, and off-price stores.
3. Hybrid Retail centers (generally 250,000 to 450,000 sq. ft.) will be permitted to develop fronting the Route 50 parallel roads in the designated area.
4. The County will seek to limit strip retail development in the Route 50 corridor by encouraging the consolidation of CLI properties with other properties to encourage coordinated development with minimal access points.

Village of Arcola and Village Perimeter Transition Area

The County supports the revitalization of the Village of Arcola and the development of a Village Perimeter Transition Area. The County envisions a mixture of uses in the Village of Arcola and Village Perimeter Transition Area to consist of small scale retail and employment uses (office and light industrial), institutional uses, residential outside of the 65 Ldn noise contour, and public and civic uses.

Village of Arcola and Village Perimeter Transition Area General Policies

1. The County supports the revitalization of the Village of Arcola, including the development of a Village Perimeter Transition Area surrounding the Village that will protect the Village from larger scale, higher intensity development.
2. The Village of Arcola and Village Perimeter Transition Area will function as an alternative shopping and working environment to the destination retail and large-scale employment uses planned to the east. New development in the Village of Arcola and Village Perimeter Transition Area will be evaluated by its contribution to achieving the following objectives:
 - a. A mix of land uses including residential, retail, office, institutional, public facilities, parks, playgrounds and other uses offering goods and services to surrounding neighborhoods;
 - b. Preservation and adaptive reuse of existing buildings where such buildings contribute to the historic character of the community;
 - c. A pattern of development that emulates the existing Village of Arcola lot pattern with smaller

- buildings in the Village of Arcola and larger footprint development locating in the Village Perimeter Transition Area closer to the Business Community areas to the east, buildings oriented to the street encouraging pedestrian activity, and using architectural design, materials, color, signage and lighting to establish and maintain a unified village design concept;
- d. A mix of open space to include active, passive and natural open space areas, with particular emphasis on preserving mature vegetation and using features such as floodplains and hedgerows to buffer and separate different uses;
 - e. A range of community civic uses including churches, community centers, libraries and cultural attractions; and
 - f. Safe and convenient walkways and streets connecting the Village of Arcola and Village Perimeter Transition Area to the surrounding areas.
3. New development in the Village of Arcola and Village Perimeter Transition Area will be evaluated on its compatibility with surrounding uses, availability of adequate roads, services and infrastructure, relationship to existing cultural and environmental resources, contribution to the land use pattern and conformance with the design objectives.
 4. To protect and enhance the character and cultural importance of historically significant areas in the Village of Arcola and the Village Perimeter Transition Area, the County, along with the local community shall work towards the designation of County Historic and Cultural Conservation Districts to protect resources such as the Slave Quarters and the Arcola Methodist Church.
 5. Retail and office proposals will combine open and civic space in features such as pedestrian promenades and plazas, public art, entrance features, linear parks and trails, outdoor seating, lawns and greens and similar design features that invite pedestrian activity.
 6. For individual uses, landscaped open space will frame pedestrian spaces and walkways, courtyards, front yards and street frontage.
 7. The County supports reduced parking standards, shared parking and remote parking in the Village of Arcola and Village Perimeter Transition Area.

Retail Development Policies

1. Retail development within the Village of Arcola and Village Perimeter Transition Area will establish and maintain a pedestrian scale, walkable shopping experience offering such features as entrances immediately adjacent to sidewalks, pedestrian amenities, outdoor eating areas, screened parking, on-street parking, parks and playgrounds and a variety of impulse, specialty outlets and services.
2. Retail uses requiring building footprints larger than 10,000 square feet should locate outside the Village of Arcola, but may locate within the Village Perimeter Transition Area when such uses are similar in scale to adjacent uses or sufficiently buffered from adjacent uses to screen the difference in scale or design. Buildings requiring heights greater than three stories should locate outside of the Village of Arcola and Village Perimeter Transition Area.
3. Retail buildings within the Village of Arcola and Village Perimeter Transition Area will use architectural features, materials, color, building scale, landscaping and other means to create a common design theme within the Village of Arcola and Village Perimeter Transition Area and will reduce the potential impact of building size, exterior cladding of the building, signs, parking and other features. Pedestrian and vehicular circulation systems in and around the retail uses will form a safe and convenient network. Outdoor lighting and signs will be small and low profile to reflect the pedestrian

nature of the community.

4. Retail buildings offering residential or office uses on upper floors are encouraged in the Village of Arcola and Village Perimeter Transition Area. Second story uses shall not be credited against density limits for planning purposes.
5. New automobile-oriented retail uses such as building supply, nursery operations, auto dealers, truck terminals, warehousing, service stations, furniture stores, drive-through restaurants and drive-through banks will not be permitted in the Village of Arcola or Village Perimeter Transition Area.
6. Where possible, and in coordination with VDOT, the County will credit on-street parking adjacent to a commercial use towards meeting parking requirements in the Village of Arcola or Village Perimeter Transition Area.
7. To maintain the integrity of an established streetscape or lot pattern and to minimize parking lot frontage along streets within the Village of Arcola or Village Perimeter Transition Area, parking lots more than 70 feet wide will be placed to the rear of buildings or will be separated from the street by a landscaped park/buffer designed to function as a public space.

Employment Use Policies

1. Office and flex industrial uses requiring building footprints larger than 10,000 square feet should locate outside the Village of Arcola, but may locate within the Village Perimeter Transition Area when such uses are similar in scale to adjacent uses. Buildings requiring heights greater than three stories should locate outside of the Village of Arcola and Village Perimeter Transition Area.
2. In evaluating proposed employment uses, the following will be considered:
 - a. The compatibility of the proposal with adjacent uses in terms of scale, operational activities (parking, loading, noise, odor...), signs, and other associated features;
 - b. The available capacity of utilities and roads and safe and convenient pedestrian linkages to residential and retail uses in the Village;
 - c. The potential fiscal and environmental impacts of the proposal;
 - d. The relationship of the proposed use to land use and design policies; and
 - e. Other matters that may determine how the proposal relates to County policy.
3. Two and three story buildings, particularly those that provide a mixture of uses, are encouraged in the Village of Arcola and Village Perimeter Transition Area.

Residential Development Policies

1. The County may permit residential rezoning at densities up to 4.0 dwelling units per acre in the Village of Arcola and Village Perimeter Transition Area depending upon the availability of utilities, transportation infrastructure, public facilities, participation in open-space preservation efforts, and compatibility with surrounding uses. All residential proposals will offer convenient and safe access to surrounding recreation, retail and employment uses.
2. Residential development above first floor retail or employment uses is strongly encouraged in the Village of Arcola and Village Perimeter Transition Area and shall not be calculated towards the planned residential density of a project.

3. The County supports residential uses at a maximum of three stories in height.

Unmet Housing Needs

1. The County encourages a variety of housing types and innovative designs to be developed in mixed-use communities to assist fulfilling unmet housing needs.
2. The County will identify options for unmet housing needs not covered by the ADU zoning ordinance and work toward an implementation plan.
3. Developers of residential and mixed-use projects are encouraged to include proffers to fulfill unmet housing needs in their development proposals.
4. The County will explore options for the creation of programs, tools and incentives both publicly and privately developed that will fulfill unmet housing needs.
5. The County will examine the authority to establish and use the benefits of Housing Trust Funds to help fulfill unmet housing needs.
6. The County will encourage public and private initiatives to provide increased housing opportunities for residents and the local workforce. Both programmatic and design approaches will be encouraged in all projects to fulfill unmet housing needs.
7. Unmet housing policies will apply until such times as the Board adopts additional housing policy.

Route 28 Corridor Plan

Introduction

The *Route 28 Corridor Plan* is the result of an issues-driven, results-oriented process with significant emphasis on community involvement. Policies in the Plan build upon the significant amount of data and public input gathered through the various Route 28 corridor activities and initiatives since January 2008. These efforts included public input sessions, interviews, targeted questionnaires, and research to develop several reports, including the Route 28 Business Outreach Results Report; Belfort Park Task Force Final Report; the Route 28 Tax District Existing Conditions Report; and the Route 28 Corridor Analysis of Development Potential for Class A Office Space¹. The following policy language and associated maps will be added to the *Revised General Plan* as a specific plan for the Route 28 Corridor. Other policies of the Comprehensive Plan will apply as appropriate.

The County envisions the Route 28 Corridor as an airport-anchored gateway into Loudoun County offering a positive and welcoming business environment that supports significant job growth and economic activity in varied settings. The County also envisions the corridor evolving into a premier location for regional, national, and international businesses with a high-quality image that offers employees vibrant centers of activity and highly-integrated pedestrian and transit-friendly employment developments. This vision reinforces the County's commitment to the continued commercial growth of the corridor that in turn contributes to the overall fiscal health and economy of the County.

The Economic, Land Use, Transportation, Housing, Design, and Sustainable Development policies contained in the plan are intended to provide a framework for future development that reflects five vision statements derived from the public process.

1. The Route 28 Corridor is an employment-based corridor that offers broad employment opportunities. The Corridor promotes a consistent pattern of development adjacent to Route 28 with higher-density office development and mixed-use activity centers. Residential densities are supportive and subordinate to employment densities within Mixed-Use Office Centers and in locations that can induce greater business activity;
2. The form and design of the Route 28 Corridor will be critical in promoting the County's vision of a high-quality office and commercial corridor that achieves higher office densities, attracts regional, national, and international businesses, and provides a unified development pattern throughout the corridor. "Places" or centers of activity offering office and office-supportive amenities along with public and civic uses will give the corridor a community identity;
3. The Route 28 Corridor takes advantage of its proximity to Washington Dulles International Airport by attracting new aviation and airport-ancillary businesses to the corridor and supporting the expansion of existing airport-related businesses in appropriate areas. The airport's location on the southern end of the Corridor also generates demand for office space from businesses that want to locate close to an international airport as well as hotels, restaurants, and retail centers that cater to business travelers and tourists;
4. The Route 28 Corridor promotes multi-modal connectivity, including transit, with the existing and planned transportation infrastructure; and
5. The Route 28 Corridor encourages sustainable development practices.

¹ All CPAM- related materials, including source documents, can be found in the Loudoun County Department of Planning public files.

The Route 28 Corridor boundaries include properties that are generally bordered by Broad Run and Loudoun County Parkway to the west, Dulles Airport and Fairfax County to the south, Cascades Parkway, Potomac View Road, and the W&OD Trail to the east, and Route 7 and Bles Park to the north. The Route 28 Corridor Boundary Map shows the actual boundaries of the Route 28 Corridor. The properties contained within these boundaries are subject to the policies contained within the *Route 28 Corridor Plan*. These policies are described below.

Economic

The County can attract greater commercial development, including high-quality office, to the Route 28 Corridor based on several advantages:

- Approximately 3,100 acres of undeveloped land within the corridor;
- High visibility and accessibility for properties adjacent to or within proximity of Route 28;
- Proximity to an improved highway, air transport, and a future mass transit network for cost-efficient and timely distribution of goods and services, employee mobility, and greater workforce commuting options;
- Direct access to the world through ample fiber lines at MAE-East and international flights at Washington Dulles International Airport;
- Close proximity to the intelligence and surveillance hub along the Route 28 South Corridor and a host of neighboring peer organizations such as Orbital Sciences, Raytheon, AOL, M.C. Dean and others;
- Availability of properties suitable for custom campus and secure office developments that can accommodate security needs and/or combined office, research and manufacturing operations; and
- Proximity to a highly-educated, diverse workforce.

The *Route 28 Corridor Plan* policies maximize the commercial development potential within the Route 28 Corridor by building on these strengths: offering planned land uses within locations that reflect the full economic potential of properties, and providing office development options within employment settings that reflect the kind of environments sought by business users. *Route 28 Corridor Plan* policies also support economic development in the corridor by accelerating the timing and absorption of office into the Route 28 Corridor submarket. Lastly, the *Route 28 Corridor Plan* promotes the growth of the commercial tax base; improving the revenue balance between commercial and residential, offsetting the greater costs of services for residential development, helping to meet or exceed the ability of the County to pay Route 28 Tax District bonds, and relieving the tax pressure on County residents by maintaining an affordable real property tax rate.

The policies contained within the plan are also intended to meet the key demands for development associated with the County's Board-adopted targeted Industry Clusters - Federal Government Contracting, Defense and Aerospace, and Information Communications Technology, as well as the emerging International Business cluster. While these businesses are currently recruited based on a cluster strategy which uses the County's existing business assets, the plan's policies establish a long-term vision for the corridor that will solidify Loudoun's corporate image and help expand the presence of these industries into the future. The plan also protects and encourages several critical features of high-end, corporate environments consistently sought by these types of industries. Specifically, the plan provides highly visible locations for high-quality office development, including custom campus headquarters and mid-to-high-

density office, and multi-use office buildings within mixed-use environments. Route 28 development patterns encourage the highest-density office space fronting along both sides of Route 28 supported by lower-density Office and Flex uses that support information technology, research-and-development, and high-end manufacturing behind the “wall” of mid- to high density, high quality office.

The *Revised General Plan* policies anticipate the continued growth and expansion of Washington Dulles International Airport for both passengers and cargo and seek to maximize the economic opportunities created by the airport. The *Route 28 Corridor Plan* policies continue to recognize Washington Dulles International Airport as a 21st Century multi-modal transportation hub that attracts airport-linked and ancillary businesses to the corridor and provides a gateway to the world. Airport-linked businesses include those businesses which rely significantly on the airport’s passenger and cargo capacity, including businesses which depend on frequent long-distance travel and businesses involved with air-surface cargo warehousing and distribution. Airport-ancillary businesses include retail, hotels, and restaurants that support the growing airport-linked businesses moving to the corridor, along with national and international businesses who locate near the corridor due to its high-quality image and accessibility to the region’s transportation network.

By clustering industrial and flex along Route 606, the County continues to support high-end manufacturing and distribution logistics, including air-surface cargo distribution, and other ancillary businesses, with the opportunity to capture even more airport-linked businesses in addition to those already emerging. The *Route 28 Corridor Plan* also encourages legacy industrial users currently along Route 28 to relocate to the more appropriate Route 606 area, which will in-turn establish a competitive, corporate gateway into Loudoun along Route 28, and strengthen and protect the identities of both Route 28 and Route 606 in future decades.

Economic Policies

1. To evolve the corridor into a premier location and employment destination for regional, national, and international businesses, including the County’s targeted Industry Clusters, properties that offer high visibility and accessibility to Route 28 shall have mid to high-density office.
2. The highest density office shall occur in areas fronting along Route 28.
3. Office developments within mixed-use settings shall be supported within the corridor to create “places”, or centers of activity, that offer a complete set of uses and amenities that will appeal to office tenants, visitors, and residents alike.
4. New residential shall be concentrated and supportive to office within three high-density Mixed-Use Office Center development envelopes that are strategically located within areas where there is the highest potential to capture high-quality and high-density Office, thereby catalyzing the office development potential of sites and their vicinities while having an overall positive impact to the County’s Route 28 Tax District debt obligations.
5. The County shall target industrial and flex businesses, including distribution logistics, to locate to the planned Industrial area in the vicinity of Route 606 where properties offer more immediate access to the airport, Route 28, and the regional surface transportation-network.
6. Legacy industrial users currently along Route 28 are encouraged to relocate to planned Industrial areas.
7. A multi-modal transportation network, including transit, within the corridor will move employees, visitors, and residents seamlessly between various modes of transport.

8. The County supports the planned development and growth of Washington Dulles International Airport and will coordinate county planning with airport planning to ensure that the health and growth of the airport and corridor economies are mutually supportive. All new development shall consider and sufficiently mitigate potential impacts to the airport, such as transportation congestion, environmental impacts, and conflicting land uses.

Land Use

The County envisions the Route 28 Corridor as a major economic and employment center with predominantly commercial development within distinct land development patterns. Office development options are intended to meet the individual needs of regional, national, and international businesses that reflect evolving market preferences and potential. The development options range from suburban, lower-density office settings to medium-density, compact, pedestrian-oriented office clusters and higher-density, transit-oriented mixed-use office centers. Other parts of the corridor more immediate to Washington Dulles International Airport and Route 606 west of Route 28 are planned for Industrial uses.

Office employment in the Route 28 Corridor is planned within the Route 28 Business area, which supports Office and Flex uses, as well as a Route 28 Core area where two types of office employment shall be developed: Office Clusters and Mixed-Use Office Centers. These land development use patterns are defined by the overall form and character of development, as well as their recommended land use mixes and intensities. Land use planning encourages higher intensity office employment uses immediately adjacent to Route 28 (generally between the parallel roads of Pacific Boulevard and Atlantic Boulevard/Shaw Road/Glenn Drive). The County may consider higher density office development adjacent to the east side of Atlantic Boulevard/Shaw Road/Glenn Drive and the west side of Pacific Boulevard as part of an integrated Office Cluster development or Mixed-Use Office Center. Flexible development options are offered elsewhere in the corridor. To catalyze office development at key locations and their surrounding areas, the development options allow three high intensity mixed-use areas to develop under certain criteria (as discussed below) that shall serve as centers of activity along the corridor. A broad range of supportive uses shall be permitted and encouraged as appropriate, such as residential, hotels and retail. To support Loudoun's industry clusters related to Federal Government Contracting, Defense and Aerospace, Information Communications and Technology, and other emerging industry clusters, the corridor shall offer unique opportunities for businesses to develop customized hybrid campuses that include combinations of office, research-and-development, and manufacturing in one development setting.

The County also will carefully consider compatibility in uses, densities, and site design of new developments with existing uses, specifically the Washington Dulles International Airport, the Loudoun Quarry, Loudoun Water's Broad Run Water Reclamation Facility and existing and planned residential neighborhoods, during the land development process. Any potential negative impacts from new developments shall be mitigated and compatible transitioning should be demonstrated. The corridor shall include a distinctive identity through the use of landmark projects as well as high quality landscaping, architecture, signage, sustainability and other design elements that will set it apart from competing areas. The County's plan for the Route 28 Corridor is intended to stimulate the development of high-quality employment settings and transform the corridor into one of greater density, a synergistic mix of uses, more pedestrian and transit friendliness, and sustainability in design and function.

General Policies

1. The Route 28 Corridor is a premier business corridor with an organized pattern of development. All land development within the corridor shall conform to the Route 28 Corridor Land Development Patterns Map and the related plan policies contained herein.

2. The County supports the continued growth of higher education and research-and-development uses within the Route 28 Corridor that are complementary and compatible with the employment character of the corridor.
3. Any large-scale Public and Civic uses located within the Route 28 Core should be well-integrated within a development and enhance economic development potential.
4. All new development within the Route 28 Corridor shall mitigate any potential negative impacts to Washington Dulles International Airport, Loudoun Quarry, Loudoun Water's Broad Run Water Reclamation Facility, and existing and planned residential neighborhoods. Compatible transitions to these uses may be appropriate through a combination of use, intensity, scale and/or building heights, and setbacks.
5. Higher Floor Area Ratios (FARs) and minimum number of stories shall ensure that land situated along Route 28 will build to its full potential, though the overall density of a project may be reduced based on environmental considerations, compatibility with surrounding uses and business requirements, and to further other planning objectives. The resulting development pattern should conform to the goal of locating the highest intensities closest to Route 28 and within ¼ mile of planned transit (bus or rail) stations.
6. With the exception of Mixed-Use Office Centers, all office land use categories provide flexibility for office campuses that include combinations of office, research-and-development, and manufacturing, provided that the project fully meets the design guidelines of this Plan.
7. The Route 28 parallel roads of Atlantic Boulevard/Shaw Road/Glenn Drive and Pacific Boulevard function as the “spines” of development in the corridor, as shown on the Land Development Patterns Map contained herein. Therefore, the County may consider higher density office development adjacent to the east side of Atlantic Boulevard/Shaw Road/Glenn Drive and the west side of Pacific Boulevard as part of an integrated Office Cluster development or Mixed-Use Office Center. Consolidation of land or parcels should occur on both sides of these roadways such that the overall development results in well-designed, high-quality uses that are functionally and visually integrated with a pedestrian-oriented streetscape that includes safe and pedestrian-friendly movement across Atlantic Boulevard/Shaw Road/Glenn Drive and Pacific Boulevard. Appropriate transitions in density from the Route 28 Core to the Route 28 Business areas should be provided within areas near existing and planned residential neighborhoods.
8. Any land development proposal located within Office Cluster or Mixed-Use Office Center areas, that includes land adjacent to the east side of Atlantic Boulevard/Shaw Road/Glenn Drive and the west side of Pacific Boulevard, may have flexibility in the internal allocation of densities such that internal areas may exceed the recommended maximum FAR provided: a.) the overall density and site design remains in conformance with plan policies, b.) the proposal is a single, fully integrated project, c.) the resulting development pattern conforms to the goal of locating the highest intensities closest to Route 28 and within ¼ mile of planned transit stops, and d.) the internal allocation of densities does not create situations where developable land is underutilized. Such proposals shall be considered on a case-by-case basis, with special consideration given to environmental and physical constraints.
9. Residential development shall continue to be located outside the adopted Ldn 65+ (day/night average noise level) noise contours for Washington Dulles International Airport.
10. Residential development within the Route 28 Tax District shall be limited to three Mixed-Use Office Centers, the Urban Center, and Residential and High Density Residential areas included in the Land Development Patterns Map. Policies for the Mixed-Use Office Centers are contained herein. Policies

for Residential, High Density Residential, and the Urban Center are located in Chapter 6 of the *Revised General Plan*.

11. Destination retail uses will be limited to the parcels bounded by Potomac View Road to the east, Cascades Parkway to the west, and Route 7 to the north as identified on the *Countywide Retail Policy Plan Amendment* map for Route 7. Policies guiding destination retail development can be found in the *Countywide Retail Policy Plan Amendment*.
12. Flex uses are supported in the Route 28 Corridor. Flex uses include laboratory, data centers, and training facilities in combination with office and research and development. Supportive Retail and Commercial uses over 10% shall be limited to showrooms associated with the predominant use.
13. Flex and Light Industrial uses are supported within planned Industrial areas in conformance with the Land Development Patterns Map.
14. The County encourages the consolidation of existing smaller properties in order to create more unified development within the Route 28 Corridor. The advantages of consolidated development include comprehensive urban design, uniform architectural treatment, controlled access, more efficient parking and landscaping, and environmental protection. Consolidation of land or parcels should occur such that the development results in well-designed, high-quality uses that are sensitive to, and functionally and visually integrated with, planned and existing developments both within and adjacent to the corridor.
15. All development proposals shall conform to a generally rectilinear grid system of streets. Development proposals adjacent to vacant or underutilized land shall include opportunities for connectivity and demonstrate coordinated site design.
16. All development within the Route 28 Corridor shall comply with the base design standards contained in this Plan. Office Clusters and Mixed-Use Office Centers shall comply with the applicable base design standards contained in the Plan regarding site design, street and block, streetscape, building form, parking, parks and open spaces, public and civic uses, landscaping, and signage that ensure high-quality design. All developments should contribute to the aesthetics of the corridor.
17. The County supports the development of a Public/Civic Facilities Plan specific to the corridor that includes the identification and location of planned public facilities, including parks and open spaces, and civic uses unique to the corridor and at a scale that is compatible with planned development.
18. For the purposes of the *Route 28 Corridor Plan*, the definition of Parks and Open Spaces and Civic and Public uses are as follows:

Parks & Open Spaces - Outdoor areas that are dedicated for public use such as athletic fields and courts, parks, greens, squares, plazas, courtyards, forecourts, and playgrounds. These spaces shall be integrated purposefully into the overall design of the development and not merely be residual areas left over after buildings and parking lots are sited. Parks and Open Spaces include open spaces in their “natural” state, such as forests, wetlands, or meadows; trails and trail connections, along with active and passive recreational spaces. The preservation of environmentally fragile and valuable land and habitat shall be given a priority. Parks and Open Spaces also include greens, squares, plazas, forecourts, and courtyards, which should be designed as appealing places that foster social interactions and are designed to hold short-term informal activities and programmed events.

Civic Use - A single-use or shared building operated by a nonprofit group or organization, exclusive of government, that is dedicated to social, recreational, religious, educational, or charitable services. A single-use building or shared building operated for-profit for public assembly may be considered as a civic use on a case-by-case basis.

Public Use - Any building or structure, accessible to the general public, and held, used or controlled exclusively for public purposes by any department or branch of the federal, state, or Loudoun County government, such as post offices, motor vehicle departments, general government support offices, libraries, community centers, recreation centers, sheriff substations, fire and rescue stations, etc.

19. The County encourages partnerships among multiple developments to contribute toward significant, meaningful, shared Parks and Open Spaces and Public and Civic uses that shall serve multiple areas within the corridor. Such a contribution may count towards a project's required Parks and Open Spaces and Public and Civic use components.
20. The County encourages innovative and sustainable design to meet a project's Parks and Open Spaces requirements, such as terraces, forecourts, promenades, enhanced entrance features, bioswales, rain gardens, and green roofs and walls. Green roofs that are proposed to meet a project's Parks and Open Spaces requirement must be accessible to the general public, or at a minimum, to all residents and employees of the building or development. Projects shall include a variety of open space types.
21. The following policies apply to all land development in the southeast quadrant of the corridor (generally south of Route 606 and east of Route 28) to reflect its proximity to Washington Dulles International Airport, Fairfax County and the Town of Herndon:
 - a. All land development proposals in this area shall be functionally and visually integrated with the adjacent transit station area planned in Fairfax County surrounding the Route 28/CIT metro station. All land uses shall be compatible with those existing and planned for Washington Dulles International Airport, Fairfax County and the Town of Herndon.
 - b. All development proposals shall provide coordinated roads, sidewalks, bike paths, and trails that provide linkages within Loudoun County to adjacent areas within Fairfax County and the Town of Herndon, in particular the Route 28/CIT metro station.
 - c. A network of streets shall be implemented to connect future development in Loudoun County to adjacent future and existing development in Fairfax County, including a grid street pattern surrounding the Route 28/CIT transit station. The grid should create a hierarchy of streets and multiple access points to higher capacity roads intended to handle the traffic.
22. The County encourages Route 28 Tax District landowners in the corridor to rezone to appropriate zoning districts in the revised zoning ordinance that are consistent with the County's overall land use vision.
23. The County supports mechanisms and incentives that extend public utilities, where absent, within the corridor.
24. The County supports a project's ability to receive an increased FAR when commitments are given that support the policies of the *Route 28 Corridor Plan*. These commitments can include, but not be limited to, exceeding the minimum number of unmet housing needs units, lot consolidation of existing smaller properties for a more unified development pattern, green building design, and structured parking at full build-out.

Route 28 Core Policies

The *Route 28 Corridor Plan* identifies areas adjacent to Route 28 for high-quality, high intensity office developments that take advantage of the economic opportunities associated with frontage on Route 28. The Route 28 Core is generally bounded by Pacific Boulevard and the Broad Run floodplain to the west and Atlantic Boulevard/Shaw Road/Glenn Drive to the east. The County supports the development of Office Clusters within the Core. To stimulate economic activity along the corridor, up to three mixed-use office

developments can be developed within this area in conformance with the Mixed-Use Office Center policies of this Plan.

General Policies

1. The Route 28 Core supports development within an Office Cluster or a Mixed-Use Office Center per the policies of this Plan.
2. The County may consider custom campuses that include combinations of office, research-and-development, and manufacturing uses within the Route 28 Core provided the predominant use in the proposed development remains office or research-and-development and the proposal conforms to the applicable base design standards.
3. With the exception of Destination, Full-Service Hotels, all new Commercial Retail and Service uses within the Core immediately adjacent to Route 28 shall be incorporated within mixed-use buildings.
4. Hotels within the core should include mid-priced, upscale, and/or luxury full-service hotels. All of these should provide at a minimum restaurant, lounge facilities, meeting space, room service and bell service.
5. Destination, full-service hotels are encouraged in the corridor and are defined as multi-story, large-scale hotels with a minimum of 200 rooms that are targeted to business and/or leisure travelers and include large meeting facilities of 10,000 square feet or greater or are combined with a convention center, and contain high-quality services and extensive amenities, including one or more restaurants, bell and valet service, room service, concierge service, 24-hour front-desk service, business services, spa service, fitness center and recreational/entertainment facilities.
6. With its proximity to Washington Dulles International Airport and as a gateway into Loudoun County, the County supports a higher concentration of destination, full-service hotels south of Sterling Boulevard.
7. Office Cluster or Mixed-Use Office Center proposals shall comply with the following criteria:
 - a. Is consistent with the intent and purpose of the Route 28 Corridor policies and base design standards contained herein.
 - b. Supports the orderly and coordinated development of its surroundings by providing appropriate connections, landscaping and opportunities for integration of the adjacent properties, through design and street connectivity.
 - c. Mitigates any adverse impacts to the built and natural environment.
 - d. Achieves adherence to the base design standards within the *Route 28 Corridor Plan*.
 - e. Complies with the sustainable development and unmet housing needs policies of the *Route 28 Corridor Plan*.

Office Cluster Policies

Office Clusters are defined as medium and high-density compact, pedestrian-oriented office developments with highly integrated office-supportive amenities including retail, restaurants, hotels, personal services, parks and open spaces, public and civic uses, and both surface and structured parking at full build-out. They do not permit a residential component.

1. Premier, highly-visible Office Clusters adjacent to Route 28 are supported in areas depicted on the Route 28 Corridor Land Development Patterns Map as Route 28 Core. Office within an Office Cluster is defined as high-quality office buildings containing four or more stories and located within areas that provide significant visibility and proximity to heavily traveled roadways.
2. A minimum of five stories is recommended for office buildings immediately adjacent to Route 28.
3. The County encourages a mix of highly-integrated uses and employment supportive uses, including Commercial Retail and Services uses, within Office Clusters. No residential development shall be permitted.
4. Vertically-mixed buildings, such as multi-story office buildings with commercial storefronts on the ground level, are encouraged within Office Clusters.
5. Single-story retail uses are permitted in Office Clusters provided they are integrated within the development and provide pedestrian accessibility.
6. Secure office and research-and-development campuses shall be permitted within areas designated as Office Clusters contingent on general compliance with the base design standards contained herein. For secure campuses, deviations from the applicable base design standards may be considered on case-by-case basis in order to accommodate security elements, for example greater building setbacks, secured perimeters, controlled site access, etc. The land use mix in an Office Cluster, based on square footage by use category, shall substantially comply with the following ratios:

Land Use Category*	Minimum Square Footage Required	Maximum Square Footage Permitted
Office	60%	100%
Commercial Retail & Services*	0%	10%
Flex	0%	10%
Public & Civic**	0%	15%

* For retail policies, see *Countywide Retail Policy Plan Amendment*

** When Public and Civic buildings are proposed, the percentage square footage of the use may count towards meeting the minimum 15% requirement as described in Policy 7

7. All Office Clusters shall include a combination of Parks and Open Spaces and Public and Civic uses consisting of a minimum of 15% of the land area of the site. All such uses shall be meaningful and appropriate to the scale, setting and location of the development. All Parks and Open Spaces and Public and Civic uses shall conform to the base design standards contained herein.
8. Subject to a County-approved Public/Civic Facilities Plan, which includes Parks and Open Spaces, up to one-third of the required Parks and Open Spaces and Public and Civic uses may be waived if contributions in the form of cash-in-lieu are provided toward such uses off-site and within the Route 28 Corridor.
9. To support adjacent and surrounding office developments, destination, full-service hotels proposed south of Sterling Boulevard may exceed the recommended 10% Commercial Retail and Services and lower FAR's may be allowed.
10. Non-residential FARs between 0.6 and 1.0 FAR are envisioned in Office Clusters within the Route 28 Core contingent upon the availability of adequate transportation improvements.

Mixed-Use Office Center Policies

The County's vision includes Mixed-Use Office Centers within development envelopes located in the northern and southern ends of the corridor to promote the County's image as a world-class business destination. A third Mixed-Use Office Center development envelope is envisioned in the central portion of the corridor. These live-work centers shall have higher intensities and a greater variety of uses than other areas of the corridor, including multi-family residential, to support a diversity of residents and workers, transit, and retail, entertainment, and recreational activities that promote vibrant 24/7 activity during morning and evening hours when employees are typically absent. Full-service and high-end limited service hotels, meeting places, destination attractions, culture, and entertainment that offer greater weekend and nighttime activity for office and Washington Dulles International Airport employees are encouraged. The mix of uses shall allow for the creation of vibrant, activity-rich centers that shall attract office tenants and a broad spectrum of residents and employees to the corridor and create unique "places" that are amenities for the entire corridor and its surrounding areas. Public and civic areas are to be provided as part of Mixed-Use Office Centers.

Within each Center, a high quality working and living environment shall be created through well-designed projects. A range of residential dwelling units that help fulfill the County's unmet housing needs shall be a vital element in these areas to ensure that affordable housing options shall be located close to employment opportunities and transit. The phased density of these Centers may be higher than other areas within the Route 28 Corridor in order to provide a well-designed urban pattern of residential and non-residential uses with the "critical mass" needed to support employment and mass transit.

1. The Plan foresees the development of up to three premier, high-intensity, Mixed-Use Office Centers, each located within the development envelopes depicted on the Route 28 Corridor Land Development Patterns Map. Office within a Mixed-Use Office Center is defined as high-quality office buildings containing seven or more stories and located within areas that provide high visibility, proximity to Route 28, accessibility from major roadways, and accessible, multi-modal transportation options.
2. Mixed-Use Office Centers shall consist of a core development located within the development envelopes depicted on the Land Development Patterns Map, be at least 50, but no more than 90, buildable acres in size and shall substantially comply with the land use mix ratios indicated in Policy 18. The County may consider proposals under 50 acres on a case-by-case basis that meet the intent of the Mixed-Use Office Center policies.
3. Additions to Mixed-Use Office Centers may be considered by the County on a case-by-case basis. The proposed addition shall:
 - (i) be adjacent to and contiguous with the core development,
 - (ii) provide an integrated development plan both internal and with the core development achieved through roadway, pedestrian and bicycle connections as well as a consistent streetscape,
 - (iii) conform to the base design standards for Mixed-Use Office Centers contained herein, and
 - (iv) shall not cause the aggregate acreage of the center to exceed 90 acres in size.
4. Proposed additions to the Mixed-Use Office Center core development may vary from the land use mix provided the aggregate Mixed-Use Office Center acreage still complies with the recommended land use mix ratios in Policy 18.

5. While the County may consider higher density development adjacent to the east side of Atlantic Boulevard/Shaw Road/Glenn Drive and the west side of Pacific Boulevard as part of an integrated Mixed-Use Office Center, the County will not support a Mixed-Use Office Center proposal that extends beyond the northern and southern boundaries of the Mixed-Use Office Center development envelopes.
6. As a major, limited access highway, Route 28 is an impediment to Mixed-Use Office Center integration and the highway shall always act as an edge when centers are proposed adjacent to the highway. As such, Mixed-Use Office Centers shall be limited to either the east or the west side of Route 28.
7. Mixed-Use Office Centers shall be developed as 24/7 amenity-rich environments unique to the corridor that appeal to a broad spectrum of employees, business tenants, and residents. A mix of mutually supportive uses shall be provided in these Centers, including business, retail, restaurants, personal services, hotels, for-sale and rental housing, civic, public, cultural, and entertainment. They shall serve as centers of activity along the corridor.
8. Mixed-Use Office Centers shall develop as vertically integrated mixed-use buildings, such as multi-story office and residential buildings with commercial storefronts at ground level. Individual residential buildings are allowed if they are well-integrated into the design of the center and conform to the Route 28 Corridor base design standards for Mixed-Use Office Centers. The Centers shall have the distinctive characteristics of an urban environment with pedestrian-oriented building facades, ground-floor shops and civic amenities, and streets culminating in distinctive public spaces. Pedestrian circulation shall be enhanced by short blocks arranged in a rectilinear grid-street pattern.
9. Single-story retail buildings conflict with the compact, pedestrian-oriented nature of these developments, are not appropriate, and should not be permitted greater than 2,000 square feet.
10. Any drive-through retail uses shall be incorporated within mixed-use buildings.
11. Residential dwellings within Mixed-Use Office Centers shall be high-density, multi-family and meet the housing policies of this Plan. The County expects the development of multi-family housing at a variety of price points for rent and for purchase.
12. Mixed-Use Office Centers shall provide for a safe, accessible, and pedestrian-friendly environment. Pedestrian and bicycle access shall be provided to transit stops/stations and neighborhoods adjacent to the area. Any potential conflicts between non-pedestrian and pedestrian circulation are to be resolved in favor of the pedestrian right-of-way.
13. Within the Centers, the highest concentration of development should be within a ¼ mile of existing, proposed, and/or planned transit stops/stations. The mix of uses at the highest concentration of development should create a critical mass of pedestrian activity as people live, work and spend leisure time in this area.
14. Major access roads shall be located on or near the periphery of Mixed-Use Office Centers to avoid conflict with pedestrian traffic.
15. Parking within Mixed-Use Office Centers at full build-out should consist primarily of structured parking. Surface parking should be avoided except for on-street parking and as needed on an interim basis in the early phases of development.
16. Given the potential for the highest intensities and the greatest mixture of uses, each land development application proposing a Mixed-Use Office Center shall analyze and effectively mitigate potential

fiscal, transportation, capital facility, housing, and environmental impacts. The following criteria shall be used to evaluate Mixed-Use Office Center proposals:

- a. New residential uses shall be contingent on the prior or concurrent construction of office uses such that office uses are the predominant use(s) on the property during each phase of the development;
 - b. The provision of a unified, coherent concept plan showing the type and scale of uses, densities, and the physical and functional integration of proposed land uses in all phases of development, including specific plans and commitments for transit station(s) that shall connect to existing and planned transit service along Route 28, and the Dulles Greenway and future connections to adjacent parcels;
 - c. The availability of appropriate multi-modal transportation improvements, including pedestrian and bicycle travelways;
 - d. The provision of utilities, public services and facilities such as schools, fire and rescue, sheriff, and recreational facilities;
 - e. The pedestrian-scaled, mixed use character of the area shall be established, commencing in the initial phase of development. The initial phase should include a grid street pattern, vertically-integrated land uses with ground-floor retail and other pedestrian activity-generating uses located along the street, plazas and usable open space, etc.; and
 - f. Commitments to address the County's unmet housing needs.
17. Approval of future development applications seeking to implement a Mixed Uses Office Center in the central portion of the Route 28 corridor, will be dependent on completion of the parallel road network to the currently congested Waxpool Road corridor, and such development applications will not exacerbate congestion in the Waxpool corridor and will provide transportation enhancements such as completion of the planned road network, including multi-modal and transportation demand management (TDM) solutions.
18. The land use mix in a Mixed-Use Office Center, based on square footage by use category, shall substantially comply with the following ratios:

Land Use Category*	Minimum Square Footage Required	Maximum Square Footage Permitted
Office	55%	70%
Commercial Retail & Services*	10%	20%
High Density Residential	15%	25%
Public & Civic**	5%	No Maximum

* For retail policies, see *Countywide Retail Policy Plan Amendment*

** At least 2% of the Public and Civic square footage shall be provided on-site.

19. Mixed-Use Office Centers that propose Destination, Full-Service Hotels may exceed the maximum 20% Commercial Retail and Services.
20. All Mixed-Use Office Centers shall include Parks and Open Spaces consisting of a minimum of 10% of the land area of the site.

21. Subject to a County-approved Public/Civic Facilities Plan, which includes Parks and Open Spaces, up to half of the required Parks and Open Spaces and three-fifths of the required Public and Civic uses may be waived if contributions in the form of cash-in-lieu are provided toward such uses off-site and within the Route 28 Corridor. Contributions would be in addition to the anticipated Capital Facilities contributions associated with the Mixed-Use Office Center.
22. All Public and Civic uses and Parks and Open Spaces shall conform to the base design standards contained herein.
23. The County anticipates a maximum residential and non-residential FAR of 1.0 and up to 1.5 with incentives for Mixed-Use Office Centers within the northern and central Mixed-Use Office Center areas and a maximum residential and non-residential FAR of 1.5 and up to 2.0 with incentives for the southern Mixed-Use Office Center area.

Route 28 Business Policies

The Route 28 Business area, as depicted on the Route 28 Corridor Land Development Patterns Map, reserves land outside the Route 28 Core for low to mid-density Office and Flex uses. Office settings allow for a limited amount of internally-oriented office-supportive uses and amenities. Within Flex settings, buildings contain spaces that can be configured to allow a flexible amount of office or showroom space in combination with research-and-development, laboratory, high-tech, and warehousing uses. Flex uses also include Data Centers. The overall intensity of these areas should generally be lower than Office Clusters and Mixed-Use Office Centers. Office and Flex developments are anticipated to include a combination of well-integrated Parks and Open Spaces and Public and Civic Uses.

1. The Route 28 Business area supports up to 100% Office and Flex uses with supportive Commercial Retail and Services limited to 10% of the floor area.
2. The County supports and encourages the development of secure office campuses and research-and-development uses within the Route 28 Business area.
3. No additional residential development shall be permitted within the Route 28 Business area outside those areas specified in Land Use General Policy 10.
4. Typical buildings within the Route 28 Business area shall contain two or more stories. The County encourages higher intensities, generally four or more story buildings, adjacent to major roadways such as George Washington Boulevard, Russell Branch Parkway, Waxpool/Church Road (Route 625), Loudoun County Parkway, Moran Road, Sterling Boulevard, Route 7, and Route 606 east of Route 28. Flex uses shall not be permitted adjacent to these roadways.
5. Route 28 Business prohibits the outside storage of materials and equipment.
6. All developments within the Route 28 Business area shall include a combination of Parks and Open Spaces and Public and Civic uses consisting of a minimum of 15% of the land area of the site. All such uses shall be meaningful and appropriate to the scale, setting and location of the development and shall conform to the base design standards contained herein.
7. Subject to a County-approved Public/Civic Facilities Plan, which includes Parks and Open Spaces, up to one-third of the required Public and Civic uses and Parks and Open Spaces may be waived if contributions in the form of cash-in-lieu are provided toward such uses off-site and within the Route 28 Corridor.

8. Non-residential FARs between 0.4 to 1.0 are envisioned within the Route 28 Business area. Lower FARs may be allowed for Flex developments.

Route 28 Industrial Policies

The Route 28 Industrial area supports Heavy Industrial, Light Industrial, and Flex uses that have traditionally clustered near the Washington Dulles International Airport. Light Industrial and Flex businesses that include warehousing, distribution, and manufacturing that rely on time-sensitive air-cargo transfer can take advantage of locating within the Industrial area. This area provides more immediate access to the airport, Route 606, Route 28, and the regional surface transportation network. Locating the Route 28 Industrial area near the airport and along the Route 606 Corridor west of Route 28 also protects land critical to airport-related businesses and directs these types of uses to land that is outside the Route 28 Core.

1. Route 28 Industrial supports up to 100% Heavy Industrial, Light-Industrial, and Flex uses with supportive Commercial Retail and Services, limited to 10% of the floor area, as depicted on the Route 28 Corridor Land Development Patterns Map as Route 28 Industrial.
2. Within Light Industrial settings, buildings contain spaces that can be configured to allow a flexible amount of office space in combination with warehouse distribution, manufacturing (light and heavy), freight-forwarding (truck terminals and air cargo), and heavy equipment repair.
3. Uses requiring considerable outside materials and equipment storage, heavy equipment repair, and similar activities shall be permitted within areas designated as Industrial.
4. All developments within the Route 28 Industrial area shall include Open Spaces consisting of a minimum 10% of the land area of the site. All such uses shall be meaningful and appropriate to the scale, setting, and location of the development and shall conform to the base design standards contained herein.
5. Subject to a County-approved Public/Civic Facilities Plan, which includes Parks and Open Spaces, up to half of the required Open Spaces may be waived if contributions in the form of cash-in-lieu are provided toward such uses off-site and within the Route 28 Corridor.
6. The County shall provide opportunities and incentives to encourage legacy industrial businesses within the corridor to relocate to designated industrial areas.
7. Non-residential FARs between 0.20 to 0.40 are envisioned within the Route 28 Industrial area.

Housing

The County's policies for Mixed-Use Office Centers include the provision of multi-family housing located close to employment, transit, shopping and services. In addition to office and residential, Mixed-Use Office Centers shall include a mix of commercial retail and services and other types of supportive uses. The plan's housing policies promote Mixed-Use Office Centers that enable employees in the corridor to live close to their places of employment.

In 2007, the Loudoun County Board of Supervisors adopted revised housing policies that are aimed at promoting housing options for all people who live and/or work in Loudoun. The County's housing policies focus on the unmet housing needs of Loudoun's citizens and workers earning up to 100% of the Washington Metropolitan Area Median Income (AMI). A 2006 study produced for the Loudoun County Housing Advisory Board by AECOM CONSULT identified a shortage of rental and owner-occupied units available for Loudoun's workers. According to the study, there is a shortage of available rental units for incomes ranging from 10 to 60% of AMI. Over time, the rental housing shortage is expected to get worse for incomes from 10 to 50% of AMI. For owner-occupied units, the shortage occurs from 10 to 120%.

Shortages worsen over time for income ranges from 50 to 100% of AMI with the most pronounced shortages for incomes at 80% of the median.

All development within the Route 28 Corridor that includes a residential component should address the County's unmet housing needs. In particular, the residential component of Mixed-Use Office Centers should accommodate a variety of age groups, interests, and needs and be accessible to those without cars, meet ADA requirements, and incorporate universal design. Appropriate contributions include Affordable Dwelling Units (ADUs) required pursuant to the Zoning Ordinance, below market rate for-purchase and/or rental units that the County deems to meet the intent of these housing policies.

Housing Policies

1. All residential development within the Route 28 Corridor shall conform to County policies for addressing unmet housing needs to encourage a diverse population of residents to support a variety of jobs.
2. Housing that is developed to fulfill unmet housing needs should be well integrated and dispersed throughout the Mixed-Use Office Centers while locating near existing or planned employment opportunities, transit routes and stops, and other amenities.
3. All proposals for Mixed-Use Office Centers shall provide a minimum of 12% of the proposal's total units on-site to address unmet housing needs. Flexibility regarding the percentages within the income tiers may be considered for projects that meet additional housing needs identified by the County. Examples include providing a higher proportion of units in the lowest income tiers or providing a high proportion of accessible units. Such proposals shall be evaluated on a case-by-case basis.
4. The minimum number of units shall be distributed as affordable based on the countywide housing policies and the following Income Tiers:

**Income Tiers for Addressing Unmet Housing Needs in the Route 28 Corridor
Based on Washington Metropolitan Area Median Income (AMI)**

Income Tier	% of Total Units	% of Total Units
		(Rental Only Projects)
0 up to 30%	2	2
Above 30% up to 60%	5	10
Above 60% up to 80%	3 (For Sale Only)	-
Above 80%-100%	2 (For Sale Only)	-

5. If required by the Zoning Ordinance, ADUs may be counted toward meeting the 12% unmet housing needs objective.
6. A covenant securing affordability for a minimum 30 years shall be attached to each unit that addresses unmet housing needs.
7. Mixed-Use Office Center proposals that commit to at least 15% of the total units for unmet housing needs objectives as set forth in Policy 4 shall be entitled to receive an increase in the FAR not to exceed 0.1 over the upper density limit set forth in the plan. Mixed-Use Office Centers that provide a greater amount of very-low income housing units based on the project's total units (0 up to 30% of AMI) may be eligible for an additional 0.1 FAR increase in floor area. Increases in floor area may be used for residential and non-residential uses in accordance with the overall land use mix.

8. All dwelling units intended to address unmet housing needs should be provided prior to or concurrently with market rate units, be dispersed throughout the project, have a similar mix to market rate units in the number of bedrooms and floor area, and be comparable to market rate units in terms of appearance, materials, and finished quality.

Transportation

Route 28 is one the most heavily traveled transportation arteries in Loudoun County, extending from Route 7 in the north to Washington Dulles International Airport and the Fairfax County line to the south. Route 28 in Loudoun County is a 6-mile long, six-lane, limited access, median divided, principal arterial with seven grade-separated interchanges. As of 2008, the latest available data from VDOT, Route 28 carries anywhere from 70,000 (at its northern most end), to 111,000 daily trips (where it intersects the Dulles Toll Road). Two parallel roads, Atlantic Boulevard to the east, and Pacific Boulevard to the west of Route 28, provide local north/south access to the corridor. A series of east/west roadways provide connections to countywide systems and allow local traffic to access the Route 28 Corridor. There are numerous bicycle and pedestrian facilities planned within the Route 28 Corridor, although the overall network remains incomplete. The Washington & Old Dominion (W&OD) Trail is the most significant non-motorized facility in the corridor. The Route 28 Corridor is currently served by both commuter and local bus service, with anticipated connections to future Metrorail.

While the corridor is currently automobile dependent, the transportation network in the future must provide more opportunities for greater bicycle, pedestrian, and transit accessibility to support the types of densities envisioned. The establishment of a multi-modal transportation network, with an emphasis on transit, is an important component to reduce future traffic impacts due to growth and to support the types of vibrant pedestrian-friendly employment and mixed-use developments envisioned in the corridor. Investments in transit within the corridor can enhance the value of adjacent properties, support greater high-quality Office development, and increase the competitiveness of the corridor within the region to attract national and international businesses. Travel Demand Management (TDM) strategies which reduce the use of single-occupant vehicle trips, optimize non-vehicular modes of transportation and maximize transportation system performance are critical for the development of the corridor. TDM strategies, in addition to the use of alternative modes of transportation (i.e. bicycle, pedestrian, and transit), also advocate a shift in traditional work schedules which may include teleworking, compressed work week, flexible work hours etc. to achieve peak hour trip reductions. The implementation of TDM strategies is also consistent with the County's goals for environmental sustainability, providing opportunities for decreased fuel consumption and reductions in greenhouse gas production. The appropriate balance between land use and transportation demands to support expected growth in the corridor is critical to maintaining the viability and economic success of the corridor as it develops in the coming years.

Transportation Policies

1. Development in the corridor shall be linked to transportation capacity. The Route 28 Corridor shall offer a balance of transportation options, including automobile, transit, pedestrian, and bicycle.
2. Development within the Route 28 Core should be compact, higher-density, and include a mixture of uses to support reductions in vehicle trips and overall traffic congestion and multi-modal development.
3. The County shall support the planning, funding, and development of public transit services for the Route 28 Corridor.
4. Per the *Countywide Transportation Plan*, the County will work with VDOT to prioritize, fund, and implement road improvements that create better efficiencies and reduce traffic congestion within the corridor.

5. The County shall require street connectivity within and between developments through a finer grid of streets to disperse traffic, reduce vehicle trips, and improve bicycle and pedestrian mobility.
6. The County shall consider reduced design speeds and other flexible design standards on road segments within the corridor to ensure safe pedestrian and bicycle mobility.
7. The County shall develop guidelines for context-sensitive street designs to improve bicycle and pedestrian accessibility, connectivity, functionality and safety within the corridor.
8. On-road bicycle accommodations and off road shared use paths and/or sidewalks shall be provided, where feasible, on the parallel roads (Atlantic Boulevard/Shaw Road/Glenn Drive and Pacific Boulevard) and major connecting roadways to provide a balanced multi-modal system.
9. The County anticipates improved multi-modal connections within the corridor and shall develop opportunities for greater bicycle, pedestrian, and transit accessibility from employment areas to existing and planned residential neighborhoods within and outside the corridor.
10. The County supports the identification of additional locations for Route 28 bicycle and pedestrian cross-connections, including bridges and decks, which shall decrease the barrier of the highway to bicycle and pedestrian movement.
11. Trail and/or sidewalk facilities shall be incorporated in all road improvement projects in which provision for pedestrian movement is consistent with the function and character of the road and/or where there is an opportunity to establish a connection with the County's existing or proposed trail system.
12. Transportation solutions in the southern section of the corridor, including transit, pedestrian and bicycle ways, and road improvements, shall be determined through a regionally-oriented approach with Fairfax County, the Town of Herndon, and the Metropolitan Washington Airport Authority (MWAA).
13. The *Route 28 Corridor Plan* incorporates the work and recommendations of the Inter-jurisdictional Group (representatives from the Town of Herndon, Fairfax County, and Loudoun County), as referenced in the following Route 28/Toll Road Area Regional Transportation Concepts map. The County also supports the incorporation of the recommendations into the *Countywide Transportation Plan*.
14. The County's Travel Demand Management (TDM) strategies contained in the *Countywide Transportation Plan* shall be used, with the assistance from the private sector, to reduce the use of single-occupant vehicle trips and optimize transportation system performance during peak and off-peak periods.
15. The County shall require a Travel Demand Management (TDM) plan for all Mixed-Use Office Center and Office Cluster developments. The TDM plan shall establish specific trip reduction thresholds related to various phases of development, identify measures to quantify these trip reductions, and include penalty provisions in the event trip reductions thresholds are not achieved.

Route 28 Corridor Plan Land Development Pattern Matrix

Land Development Pattern	Floor-to-Area Ratio (FAR)	Typical Uses Envisioned	Number of Stories
<p>Route 28 Core:</p> <ul style="list-style-type: none"> Office Cluster 	Between 0.6 and 1.0 FAR contingent on transportation improvements	<p>Office Clusters; Mixed Use Office Centers</p> <p>Mix of highly integrated uses and employment supportive uses; encourage vertically-mixed buildings with commercial storefronts on ground level; no residential uses allowed; may include custom campuses; predominately Office, limited Commercial Retail and Services; Public and Civic uses</p>	Four or more stories; minimum of five immediately adjacent to Route 28
<ul style="list-style-type: none"> Mixed-Use Office Center (MUC) 	1.0 FAR up to 1.5 FAR with incentives for the northern and central MUC areas; 1.5 FAR up to 2.0 FAR with incentives for the southern MUC area	<p>Mix of mutually supportive uses including: business, retail, restaurants, personal services, hotels, for-sale and rental housing, civic, public, cultural and entertainment uses; 27/7 amenity-rich developments; vertically integrated mixed use buildings; “urban feel” with pedestrian-oriented building facades; high-density, multi-family residential dwellings only</p>	Seven or more
Route 28 Business	Between 0.4 and 1.0 FAR; lower FARs in Flex developments	Low to mid-density Office and Flex uses; includes secure office campuses and R&D; supportive Commercial Retail and Services up to 10% of FAR; no residential uses; no Flex adjacent to major roadways; no outdoor storage; Large scale Public and Civic uses allowed	Two or more; higher intensities, generally four or more adjacent to major roadways
Route 28 Industrial	Between 0.2 and 0.4 FAR	Up to 100% Heavy Industrial, Light Industrial, Flex uses with supportive Commercial Retail and Services limited to 10% of FAR; Includes: warehousing, distribution, manufacturing; outdoor storage of materials and equipment allowed	Not specified

Design

The development patterns supported in the Route 28 Corridor, including Mixed-Use Office Centers, Office Clusters, Office, and Flex, focus as much on the physical form and character of development as much as their uses. Adherence of developments to the base design standards below is important to achieving a unified development pattern in the corridor that is consistent with the Route 28 Corridor Land Development Patterns Map. Adherence to the base design standards also contributes to a high-quality image for the corridor that attracts regional, national, and international businesses.

General Policies

1. The County shall develop a user-friendly, illustrative design handbook that reflects the Route 28 base design standards contained herein. The handbook shall convey a high quality image for the Route 28 Corridor and promote an overall sense of place through design elements that relate to block size, circulation and connectivity, streetscape and street sections, building form, placement (setbacks), orientation, articulation, Parks and Open Spaces, Public and Civic uses, landscaping and sustainability.
2. The base design standards emphasize the integration of natural features and shared, meaningful Parks and Open Spaces.
3. Office Clusters and Mixed-Use Office Centers shall create a sense of place and establish the Route 28 Corridor as a premier employment location. In particular, development of a gateway at the southern end of the corridor shall convey a positive and welcoming sense of arrival for visitors and business travelers to the Route 28 employment corridor and into Loudoun County. Unique design shall occur within or proximate to a Mixed-Use Office Center, including iconic buildings, structures, and monuments, significant signage, and public art/sculptures that are visible from the gateway crossroads of Route 28 and the Dulles Greenway/Toll Road.
4. Design commitments for proposed developments within the Route 28 Core and Route 28 Business areas shall demonstrate conformance with the standards of the Plan.
5. The County shall consider incentives for property owners to upgrade their existing developments to meet the Route 28 Corridor base design standards.
6. Developments within the Route 28 Corridor shall have minimal impact on environmentally-sensitive areas and surrounding residential uses and exhibit design consistent with the Green Infrastructure and land use policies of the Plan. Existing historic sites, as well as the natural environment, should be incorporated and highlighted in the overall architectural and landscape design.
7. Office Clusters and Mixed-Use Office Centers within the entire Route 28 Corridor shall be subject to specific base design standards contained herein.
8. Developments proposed in the Route 28 Business area shall be subject to the applicable base design standards for Office and Flex uses contained herein. Generally, Flex developments in these areas should be designed within a park-like atmosphere, exhibiting a high curb appeal through the use of extensive landscaping and coordinated building architecture. Office uses should be located to the front of the building along the roadways, with Flex uses and parking to the rear of the property.
9. Developments proposed in the Route 28 Industrial area shall be subject to the applicable design guidelines for General Industry uses contained in the *Revised General Plan*.

10. Developments on small parcels that may not be able to achieve the full vision of an Office Cluster may be considered if proposed developments are able to meet the intent of the base design standards and can demonstrate compatibility and integration with adjacent developments.

Office Cluster and Mixed-Use Office Center Design Standards

The Route 28 Core supports a development pattern of mid to high-density, compact, and pedestrian oriented Class A Office developments through Office Clusters and Mixed-Use Office Centers.

Adherence to the base design standards listed below for Office Cluster and Mixed-Use Office Center developments establishes a consistent development pattern along Route 28 that supports a viable, cost-effective planned transit system. The base design standards also establish a more predictable development environment for businesses seeking to develop and locate into the corridor; ensure that developments are compatible with adjacent land uses; contribute to the character of the neighborhood and larger community; create vibrant, pedestrian-oriented places; and support developments that are high quality and visually appealing from adjacent streets and surrounding neighborhoods with an emphasis on building placement and orientation as well as site design.

The development pattern for Office Clusters shall be highly-integrated, compact, mid- to high-rise employment settings. Buildings in Office Clusters shall be four or more stories and shall provide both structured parking and minimal surface parking. It is envisioned that larger-scaled buildings with building heights of five stories or more shall be located along Route 28 with lower density and building heights further away. Office Clusters feature buildings arranged around squares, greens, plazas, forecourts, and courtyards on blocks formed with a rectilinear street pattern. Office Clusters also include landscaped, walkable streets that can feature buildings with storefronts offering ground floor Commercial Retail and Services. Office Clusters are encouraged to provide Parks and Open Space features such as pedestrian promenades, linear parks and trails, outdoor amphitheatres, and similar design features that invite additional pedestrian activity, recreation, and socialization.

The development pattern for Mixed-Use Office Centers calls for a higher intensity of development than Office Clusters. Office buildings within Mixed-Use Office Centers contain seven or more stories. Parking within Mixed-Use Office Centers at full build-out shall consist primarily of structured parking. The centers should have a lively, robust character with an integrated mix of uses that include Office, Commercial Retail and Services, Residential, Parks/Open Spaces and Public/Civic Uses. The design of Mixed-Use Office Centers is similar to Office Clusters and features a compact urban design with pedestrian-oriented building and parking garage facades, ground-floor shops, and distinctive public spaces. Pedestrian and transit circulation are enhanced by short blocks arranged in a rectilinear grid-street pattern.

Site Design Standards:

1. Office Clusters and Mixed-Use Office Centers shall be designed as higher density, compact, and highly integrated developments that foster pedestrian activity.
2. Developments shall enhance the existing character of the area, and build upon an established sense of place in the surrounding neighborhoods.
3. Heritage and environmental resources shall be preserved and incorporated into the overall design of developments.
4. Pedestrian and bicycle facilities shall be incorporated into all new developments.
5. Transit stops shall be incorporated into the layout of all Mixed-Use Office Centers.

Street and Block Standards:

1. Internal streets shall follow a grid-street pattern to maximize pedestrian connectivity, improve traffic movement along multiple transportation routes and encourage shorter trips, unless precluded by natural and topographical barriers.
2. A hierarchy of streets shall be identified, both internal and adjacent to a development, with street design standards that are context-sensitive to adjacent developments. Street hierarchy shall include primary streets where there shall be a focus of pedestrian activity, along with key areas of ground-floor retail activity where there is a high percentage of planned Commercial Retail and Service uses.
3. The street network shall provide for the efficient movement of vehicles while minimizing conflicts with pedestrians and bicycles.
4. The street network shall provide connections to adjacent existing and planned developments. The street network shall also connect to the surrounding street network.
5. Blocks shall be configured at a pedestrian-scale that encourages walkability. “Superblocks” should be avoided. Perimeter block sizes within Mixed-Use Office Centers and Office Clusters generally should not exceed 2,000 feet.
6. Blocks in Mixed-Use Office Centers should not exceed 400 linear feet. To mitigate the impact of longer blocks, any one block with a linear length of 400 feet or greater should provide in the middle of the block an alley, driveway, pedestrian way or other significant pedestrian feature such as a plaza, park, or promenade.

Streetscape Standards:

1. Streetscape design shall ensure the space between the buildings and the roadways contribute to a comfortable pedestrian environment providing adequate space for efficient, safe, and accessible pedestrian circulation and a sense of enclosure that supports useable pedestrian spaces. Street trees and plantings should be considered to enhance the character of the street.
2. Large-lot commercial developments shall provide both vehicular and non-vehicular linkages to surrounding areas and between office buildings and other uses.
3. Transit stops not integrated into buildings, shall be provided with safe, covered bus stops and waiting areas to shelter pedestrians from the elements.

Building Standards:

1. Office Clusters shall feature buildings of four or more stories, except adjacent to Route 28 where buildings of five or more stories are envisioned. Mixed-Use Office Centers shall feature buildings of seven or more stories with a general stepping down of densities towards the periphery of developments when necessary to be compatible with surrounding communities and developments.
2. Where not incorporated into mixed-use buildings, residential buildings within Mixed-Use Office Centers shall be urban in character and compatible in form and scale with surrounding commercial buildings.
3. Distances between buildings shall be minimized to create safe, pleasant, and active street-level environments and support pedestrian connectivity between buildings, thereby reducing the need for residents, employees, and visitors to drive their automobiles to reach supportive uses, including Commercial Retail and Services.

4. Buildings shall be placed close to streets with minimal setbacks and include planting, pedestrian, sidewalk, and frontage zone standards appropriate to the context of adjacent developments. Buildings should adhere to build-to-lines.
5. Primary building entrances shall be oriented towards the street or a common gathering place such as a plaza, green, park, square, or pedestrian passageway. Pedestrians should be able to easily identify primary entrances into commercial establishments.
6. Buildings greater than 12 stories shall be designed to include façade articulation with design details and features such as building step-backs, to reduce visual massing and mitigate impacts to adjacent properties.
7. Building materials and colors shall exhibit high-quality designs with articulation on all sides of the building.
8. Mixed-Use Office Center service areas, including refuse and loading areas, should be enclosed within the principal building. Doors for access to the service areas should blend with the architectural treatment of the building.
9. Office Cluster service areas, including refuse and loading areas, should be screened from view by visitors and passers-by through landscaping or screening.

Parking Standards:

1. To encourage compact, pedestrian-oriented developments, structured parking is supported within Office Clusters and Mixed-Use Office Centers. Office Clusters may contain both surface and structured parking, depending on the density proposed on-site, whereas Mixed-Use Office Centers shall contain predominately structured parking at full build-out.
2. Phasing of surface to structured parking during the construction of Office Clusters and Mixed-Use Office Centers shall be considered through the application process.
3. The joint use of drive aisles and parking areas should be encouraged to reduce overall parking needs.
4. Parking should be located to the rear of buildings, within the interior of blocks, with access from alleys or streets which do not conflict with pedestrian access.
5. Structured parking should be conveniently or centrally located, but visibly minimized from arterial streets and public spaces. Surface parking should not occupy lots which terminate a street vista or abut street intersections.
6. In Mixed-Use Office Centers and Office Clusters with supportive uses, primary pedestrian streets with ground-floor structured parking should include ground-floor uses or liner buildings with retail, services, restaurants, and offices.
7. Surface parking lots should be avoided along primary pedestrian streets. Surface parking lots should be adequately screened from the street side.
8. Within Mixed-Use Office Centers, parking at full build-out shall not be located along blocks where it is the sole use.

Parks and Open Spaces Standards:

1. Parks and Open Spaces include pedestrian-scaled outdoor areas such as greens, squares, plazas, courtyards, forecourts, and playgrounds. Parks and Open Spaces also include open spaces in their “natural” state, such as forests, wetlands, or meadows; trails and trail connections; and active and passive recreational spaces.
2. Parks and Open Spaces shall be integrated purposefully into the overall design of a development and not merely residual areas left over after buildings and parking lots are sited.
3. Parks and Open Spaces designed to function as gathering places should be clearly identified and accessible to pedestrians and bicyclists.
4. Parks and Open Spaces shall be dispersed so that all residential dwellings and non-residential buildings are located within 1,500 feet of such spaces.
5. Greens, squares, plazas, forecourts, and courtyards shall be designed as appealing places to gather with the type of amenities that foster informal social interaction among users. Examples of amenities within these areas include ponds, fountains, ornamental lamps, terraces, waterfalls, sculptures and other public art, planted beds, benches, drinking fountains, and clock pedestals.
6. Within Mixed-Use Office Centers, greens, squares, and plazas are encouraged to consider outdoor seating areas, amphitheatres, and other design elements that support more structured, formal activities.
7. Small-scale single or two story commercial retail buildings, such as restaurants, coffee shops, bakeries, and public markets, are allowed within greens, squares, plazas, forecourts, and courtyards.
8. Heritage and environmental resources shall be incorporated into Parks and Open Spaces and pursuant to the *Heritage Preservation Plan*.
9. The preservation of environmentally fragile and valuable land and habitat shall be given a priority for Open Space set-aside.
10. Parks and Open Spaces should connect with and provide views to natural amenities.
11. Developments should identify linkages to the existing or planned trail network.
12. Mixed-Use Office Centers should provide active Open Space to serve the concentration of residents within the center.

Public and Civic Standards:

1. Public and Civic Uses shall be integrated into the community with maximum visibility and accessibility.
2. Planned transit stops shall be provided at all Public and Civic buildings.
3. Prominent and highly visible sites should be prioritized for Civic and Public uses. Prominent sites include a location along a primary pedestrian street or at the terminus of a street vista.
4. Parks and Open Spaces should be considered in combination with public and civic buildings that include seating areas, public art, planted beds, benches, drinking fountains, etc.

Landscaping Standards:

1. Landscaped areas should be used to frame and soften structures, to define site functions, to enhance the quality of the environment, and to screen undesirable views.
2. Tree and plant selection and location should promote safety and security, enhance natural environment and stormwater management, provide shade for vehicles and pedestrians, reduce heat islands, and minimize maintenance requirements.
3. Low water use plants and native vegetation shall be used to landscape new developments.
4. No invasive plant species shall be allowed in the landscape design.

Signage Standards:

1. Visitors and residents should be able to locate and identify major attributes of a development through a unified signage concept.
2. Signage should contribute to the overall architectural and landscape theme.
3. Signage should be used to clearly identify public versus private/residential areas.
4. Streetscape signage should be appropriately scaled for pedestrians.

Sustainable Development

Sustainable development is the relationship between people, the built environment, management practices, and green infrastructure. Sustainable development calls for practices that are economically cost-effective, enhance human health and well being, and protect and restore the environment. The *Route 28 Corridor Plan* supports opportunities and incentives for sustainable development so that land development is at the forefront of such practices, including green building techniques and technologies which include sustainable site design and integrated energy management planning. The Route 28 Corridor also includes older, developed areas that do not meet today's current stormwater management requirements. As a result, stormwater management facilities in these areas do not achieve adequate pollution filtration and control. Sustainable landscaping strategies can help correct these deficiencies and retain and treat stormwater, reduce stormwater runoff pollution, provide habitats for insects and migratory birds, and retain open space.

Given the diversity of Green Infrastructure within the Route 28 Corridor, the opportunity exists for development at full densities while promoting stewardship of natural areas. The defining natural feature of the corridor is the Broad Run, which drains to the Potomac River. The remaining forested lands in the corridor are primarily associated with the Broad Run and its floodplain. The Broad Run watershed also includes numerous streams, including Cabin Branch, Indian Creek, and various unnamed tributaries. The quality of these waters and the surrounding riparian areas are important not only to aquatic life and wildlife, but when integrated into development, can be an amenity for businesses, employees, and residents in the corridor. Other Green Infrastructure resources associated with the Broad Run include a heron rookery, the State-threatened Wood Turtle within upstream tributaries of Broad Run, and habitat along portions of and areas surrounding Bles Park.

Significant standing heritage resources in the Route 28 Corridor include the W&OD Trail along with the Toll House and its associated Broad Run Bridge remnants, or Stone Bridge, both of which date to 1820. Other heritage resources in the area include portions of the Vestal's Gap roadbed, of which a small segment remains in the vicinity of the Dulles Town Center and a continuous segment survives through the Claude Moore Park, and historic sites in the Old Sterling area. Archaeological village and encampment sites can

also be expected at the confluence of major streams with smaller settlements expected along contributing streams. Other Green Infrastructure elements within the Route 28 Corridor include planned and existing trails and noise contours associated with Washington Dulles International Airport. In addition, steep and moderately steep slopes are present, primarily within or adjacent to the stream valleys and surrounding the Loudoun Quarry.

Energy Policies

1. The County shall encourage opportunities for efficiency through consumption, transmission and localized production. These opportunities can include increased building weatherization and system efficiencies, micro-grid development, and renewable/alternative energy installations.
2. The County shall encourage benchmarking the energy use of existing and planned buildings in the Route 28 Corridor to establish a baseline for energy demand estimates in the corridor.
3. The County expects localized, integrated energy management systems, such as recovery waste heat from high output uses like data centers, to provide heating and cooling to nearby properties and promote the use of non-traditional energy sources.

Stormwater Policies

1. The County expects the harvesting of rainwater for non-potable use, such as landscape irrigation, within all projects.
2. To mitigate the effects of impervious cover within the Broad Run watershed and to update older stormwater facilities, the County shall encourage efforts such as retrofitting stormwater systems and rehabilitating degraded areas to enhance their pollution removal capabilities and enable these facilities to become open space amenities.
3. The County promotes the use of low-impact development to replicate natural hydrologic patterns and alleviate the strain on centralized systems. Low-impact development practices can include stormwater planters, rain gardens, and wetlands to convey, retain, and treat rainwater.

Green Building Policies

1. The County shall establish a green building program to assist the private sector in implementing the recommendations outlined in this plan.
2. The County shall establish standards and promote green building within the Route 28 Corridor.
3. All county-constructed facilities shall be constructed to a minimum of LEED Silver, or equivalent standards.
4. The County shall support Loudoun Water in the expansion of the reclaimed water network.

Landscaping Policies

1. The County encourages landscape approaches that conserve energy, treat stormwater runoff, minimize yard waste, control the spread of invasive species, and improve the health of site users.
2. The County promotes the use of salvaged materials whenever possible, restoration of degraded areas, the reintroduction of native vegetation, the use of street trees to reduce energy and stormwater treatment costs, and practices to decrease soil compaction and increase the soil's nutrient content and its ability to absorb water.

3. Habitat and recreational paths shall be encouraged along utility and abandoned rights-of-way and natural features such as streams and wetlands.

Green Infrastructure Policies

1. The Green Infrastructure is a critical framework of the corridor that shall guide where and how development and redevelopment occurs. Green Infrastructure resources shall be protected and enhanced.
2. The stream corridors associated with the Broad Run and its tributaries shall be used as its primary organizing element. As the main organizing feature of the Route 28 Corridor, the Broad Run shall be protected and enhanced to provide ecological benefits while being an amenity for employees and residents.
3. The Broad Run and its floodplain is envisioned to serve as a linear park that protects the river as a natural resource while integrating it into development as an amenity for businesses and their employees - including providing the opportunity for employees to bike and walk to work.
4. The Broad Run's tributaries, including Cabin Branch, Indian Creek, Russell Branch, Beaverdam Run, Stallion Branch, and Horsepen Run, should be used as Green Infrastructure links that connect employment centers with neighborhoods and other hubs of activity both within and adjacent to the corridor, including parks, heritage resources, and Public/Civic buildings. Current and planned hubs include the Urban Center, Claude Moore Park, and the Toll House and Broad Run Bridge. Connections should include recreational trails with permeable surfaces similar to the C&O Canal Path.
5. Development activities should assess the condition of Green Infrastructure resources, enhance these resources, and create links to other areas to create a Green Infrastructure network.
6. For degraded forested areas close to the Broad Run and its tributaries, the County promotes reforestation.
7. The County shall collaborate with the Department of Environmental Quality on any pollution impairment issues that become apparent within the Broad Run and its tributaries and shall support volunteer water quality monitoring efforts and coordination of these efforts with federal, state, and local water quality data collection.
8. The County shall support public access through the Broad Run floodplain using methods that protect sensitive features, including the use of pervious trail surfaces.
9. The County shall coordinate with the Metropolitan Washington Airport Authority regarding water quality protection within the Broad Run watershed.
10. Unique heritage resources within the corridor, including the Broad Run Toll House and Bridge, the remaining segments of Vestals Gap Road, and the W&OD Trail should be preserved and considered in the design, construction, operations, and maintenance of development within the corridor. Preserving and enhancing these resources fosters an appreciation for their role in the built environment.

Implementation

The *Route 28 Corridor Plan* envisions the corridor as an airport-anchored international gateway into eastern Loudoun County that supports significant job growth and economic activity within varied settings. The County also envisions the corridor evolving into a premier location for regional, national, and international businesses. The policies contained in the *Route 28 Corridor Plan* are therefore intended to

induce development towards this vision. Expected outcomes include the acceleration of the timing and absorption of Class A office and an increase in the overall rate of commercial development in the corridor. This will also provide the revenue required for the County to meet or exceed the ability to pay Tax District Bonds. The Countywide outcome will be a growth in the commercial tax base; thereby improving the revenue balance between commercial and residential, offsetting the greater costs of services for residential development, and relieving the tax pressure on County residents by maintaining an affordable real property tax rate.

The County shall form a temporary Route 28 Implementation Committee of public and private experts to assist the County with the marketing, development and monitoring of the Corridor's strategic implementation plan, including the metrics used to assess the impact of the *Route 28 Corridor Plan* on expected outcomes. The Implementation Committee shall establish three work groups related to plan implementation:

- a. Design: The work group will assist with: the development of an illustrative design handbook and architectural standards for property owners and developers in the corridor, coordinate with the Zoning work group on the development of design regulations and performance standards as part of revisions to the *Loudoun County Revised 1993 Zoning Ordinance*, and identification and planning of high priority gateways, bridge enhancements, landscaping projects, and other roadway beautification efforts;
- b. Zoning: The work group will advise the County with the development of the zoning mechanisms (regulations and performance standards) that will be used to implement corridor plan policies;
- c. Transportation: The work group will assist with: coordination with VDOT to develop priorities and implementation plans for road improvements that create better efficiencies and reduce traffic congestion within the corridor, develop guidelines for context-sensitive street designs, identify opportunities for greater bicycle, pedestrian, and transit accessibility from employment areas to existing and planned neighborhoods within and outside the corridor, identify additional locations for Route 28 bicycle and pedestrian cross-connections, including bridges and decks, which will decrease the barrier of the highway to bicycle and pedestrian movement, and develop Travel Demand Management strategies with assistance from the private sector to reduce the use of single-occupant vehicle trips and optimize transportation system performance during peak and off-peak periods.

Implementation Policies

1. The County shall develop metrics, such as absorption rates and assessed values, to be used on a regular basis to assess the impact of the *Route 28 Corridor Plan* on the expected outcomes as defined in the Plan.
2. The County shall amend the Zoning Ordinance by developing Land Use Patterns as an alternative development option within specific Zoning Districts as well as create a new Mixed-Use Zoning District to implement the policies of this Plan. The County shall establish a Coordinated Review Committee comprised of representatives from various County agencies to ensure consistency with the Use Pattern design controls and standards.
3. The County shall develop a user-friendly, illustrative design handbook that reflects the Route 28 base design standards contained herein. The handbook shall convey a high quality image for the Route 28 Corridor and promote an overall sense of place through design elements that relate to block size, circulation and connectivity, streetscape and street sections, building form, placement (setbacks), orientation, articulation, Parks and Open Spaces, Public and Civic uses, landscaping and sustainability.

4. The County supports the development of a Public/Civic Facilities Plan specific to the corridor that includes the identification and location of planned public facilities, including parks and open spaces, and civic uses unique to the corridor and at a scale that is compatible with planned development. Such a plan shall also include the identification of mechanisms for development contributions of such uses off-site and within the Route 28 Corridor that may also count toward projects' required Parks and Open Spaces and Public and Civic use components.
5. The County shall develop a "fine-grained" road network map of the corridor for the purpose of developing and implementing a preferred corridor street pattern to advise and guide proposed developments.
6. The County shall explore opportunities to encourage the consolidation of existing smaller properties to promote more unified use patterns within the Route 28 Corridor. Potential incentives for lot consolidation include:
 - a. Development intensity bonuses in the form of increased Floor Area Ratio (FAR) densities for developments initiating a lot consolidation to a certain minimum overall size, including different tiers of increased FAR bonuses based on the overall size of the consolidated parcels, location of the project site, and/or type of development proposed (Office Cluster, Mixed-Use Office Center, Route 28 Business); and
 - b. Fee assistance and other financial incentives to encourage lot consolidation such as permit fee assistance (waivers, reduced fees, etc.)
7. The County shall designate specific commercial revitalization target areas in the corridor and identify potential revitalization opportunities for property owners to upgrade under-utilized properties to their highest and best use, such as property tax abatements for real and personal property taxes over a specified time period, and establish a commercial revitalization program that provides financial assistance in the form of exterior rebates and commercial loans for physical improvements to commercial properties, including improvements to exterior building façades (storefronts, awnings, exterior lighting), renovations to correct code violations or improve handicap accessibility, etc.

1. Urban Centers

An Urban Center functions as an intensive, large-scale mixed-use community. It features well-configured squares and greens, a traditional network of landscaped streets with frontages dedicated to the social, recreational, and visual enjoyment of the pedestrian as well as the motorist, a rectilinear pattern of small blocks, and the location of civic buildings that act as landmarks and symbols of community identity. Like traditional urban centers that go through continual cycles of change, the modern Urban Center will evolve through phasing in response to changes in the surrounding communities, the development of services such as mass transit, and changes in business and housing trends.

The Plan foresees the development of one high-intensity, mixed-use Urban Center in the Suburban Policy Area at the Route 7/Route 28 interchange, which is currently in development. The phased density of the Urban Center will be higher than other Suburban areas and similar to Transit-Oriented Development to provide a well-designed urban pattern of residential and non-residential use related to mass transit. The development of an Urban Center will include a conceptual plan for expansion and will include specific plans for a transit stop to connect with transit service along the Dulles Greenway.

Urban Center Policies

1. One Urban Center is proposed at the southeast quadrant of the Route 28 and Route 7 intersection, intended to evolve from the current shopping/mixed-use center.
2. The Urban Center functions as a mixed-use service, retail, and residential component of a larger Business land use.
3. The Urban Center will be located in the interior rather than on the edge of the community it serves and should have easy pedestrian, bicycle, transit, and automobile access.
4. The Urban Center will be between 50 and 90 acres in size.
5. Commercial uses within the Urban Center will not include destination retail uses such as a building supply, nursery operation, auto dealership or similar uses requiring outdoor display or storage. Large-scale single-story retail uses that require over 20,000 square feet also conflict with the compact nature of the center and are not appropriate in the Urban Center.
6. Residential densities from 8.0 to 16.0 dwellings per acre may be permitted in the Urban Center, contingent upon the availability of utilities, pedestrian and bicycle travelways, and public facilities; conformance to the community design and growth management policies of this Plan; the preservation of a substantial amount of open space either on-site or off-site (but in the same community) through open space easements or other means. Density up to 24.0 dwelling units per acre will be permitted when bus transit related services (e.g., bus, light rail) and facilities are provided, such as a transit stop and access to it through a dedicated transit corridor. Residential areas within the Urban Center will be subject to the design criteria outlined in the Residential policies and Chapter Eleven of this Plan.
7. Non-residential FAR up to 0.4 may be permitted in the Urban Center, contingent upon the availability of utilities, pedestrian and bicycle travelways, and public facilities. Non-residential FAR up to 1.0 may be permitted when adequate bus transit facilities are provided, such as a transit stop and access to it through a dedicated transit corridor. Non-residential FAR up to 2.0 may be permitted in an Urban Center when rail facilities are planned, scheduled, designed, and fully funded to serve the Urban Center, residential densities.
8. The land use mix (measured as a percentage of the land area) in an Urban Center generally will comply with the following ratios:

Land Use Category*	Minimum Required	Maximum Permitted
a. High Density Residential	10%	25%
b. Commercial Retail & Services*	10%	50%
c. Regional Office	0%	50%
d. Overall Office & Light Industrial Uses (c & d combined)	30%	20%
e. Public & Civic	10%	No Maximum
f. Public Parks & Open Space	10%	No Maximum

* Retail Policy guidance provided in *Countywide Retail Plan*

9. Urban Center policies will be updated by Community Plan policies.

2. Transit Nodes

The two Transit Nodes located along the Dulles Greenway are key land use components of the Suburban Policy Area. The Transit Nodes are associated with transit centers. Transit centers are places where transit services connect in the transportation network and where passengers transfer between transportation modes. Transit centers will be sufficiently separated along the Dulles Greenway to preserve the distinct features of each Transit Center and to protect sensitive environmental features between them. In addition, sufficient separation provides for the efficient engineering and operation of transit – allowing sufficient start/stop time and operation at preferred speeds.

The two nodes are very different, in terms of their function and design, and as such are denoted as a Transit-Oriented Development (TOD) and a Transit-Related Employment Center (TREC). The discussion and policies contained in the *Toll Road Plan* regarding Transit Nodes have been included here and modified for clarity of the transit strategy planned for eastern Loudoun. The policies contained in this section provide guidance for the two types of transit nodes. Additional transportation policies for the Suburban Policy Area are contained in the *Revised Countywide Transportation Plan*. The County expects that property owners will work together with the public sector (the County, Washington Metropolitan Area Transit Authority, Metropolitan Washington Airport Authority, State Department of Rail and Public Transportation, etc.) to ensure that adequate transit facilities and connections for all modes are in place to support maximum use of the transit system. This type of joint public-private partnership is required in the planning of the Transit Nodes, and all property owners are encouraged to work together in designing a unified development plan for the Transit Nodes.

The purpose of Transit Nodes is to limit sprawl and to reduce public costs; to provide the “critical mass” needed to support bus and rail transit; to provide a development alternative that promotes the separation of automobile-oriented land uses from transit-oriented land uses; and to maintain the efficient operation of the Dulles Greenway. The two Transit Nodes are both-transit-oriented, but serve several different functions. One is envisioned as a compact employment center with offices and support services, or as a Special Activity destination, consisting of a convention center, professional sports stadium, or other Special Activity use with supporting hotels and commercial services. The other Transit Node is a mix of high-intensity land uses ranging from high-density residential uses, regional offices, entertainment and cultural centers, and other business and support services.

The TOD will be located between the Loudoun County Parkway and Route 772 interchanges and comprise a mixed-use development. The TREC will be located to the north of the Dulles Greenway north and west of the Route 606 interchange and the Dulles North Regional Transit Center, a regional park-and-ride facility. Because of the constraints of the Dulles Airport 65 Ldn, the Dulles North Transit Center, and the importance of preserving the natural environment around the Broad Run, the TREC is planned for concentrated employment use or Special Activity use without a residential component.

Transit Node Policies

1. The areas that could accommodate the TOD or the TREC are depicted on the Land Use Map.
2. The boundaries of a Transit Node will vary to correspond with physical and natural barriers that limit compact development, pedestrian connections and movement, and access to the transit station. Limiting factors will include topography, and major arterials, so that the Transit Node may not be a full radius, but will be influenced in form by natural and man-made barriers.
3. Major access roads will be located on or near the periphery of the Transit Nodes to avoid conflict with transit services and pedestrian traffic.
4. Nodal land uses should be adjoining or located in close proximity to one another to ensure a compact development pattern and a continuous urban streetscape not interrupted by parking lots or empty lots.
5. Proposals for the development of a Transit Node should include a unified, coherent concept plan showing the type and scale of uses, densities, and the physical and functional integration of proposed land uses, including the pedestrian connections between uses and transit stops.
6. The County will encourage the cooperation of all landowners in the development of the Transit Nodes to ensure conformance with the Transit Node concept set forth in the *Revised General Plan*.
7. Automobile-oriented land uses such as building supply; nursery operations; auto dealers; large-scale, single-story retail uses; truck terminals; warehousing; golf courses; service stations; furniture stores; drive-through restaurants and drive-through banks will not be located in Transit Nodes.
8. The County expects that property owners will work together with the public sector (the County, WMATA, MWAA, DRPT, etc.) to ensure that adequate transit facilities and connections for all modes to support maximum use of the transit system.

a. Transit-Oriented Development (TOD)

Land adjacent to the Dulles Greenway will be the site of a compact Transit-Oriented Development (TOD) that will have densities to support a balanced mix of jobs, transportation, and high-density housing. The TOD will provide pedestrian-scale development with a mix of residential, commercial, public, and employment uses. Pedestrian circulation will be enhanced by short blocks arranged in a rectilinear grid-street pattern. The street pattern should be simple, memorable, and direct, avoiding circuitous routes. For the pedestrian, an inter-connected (or grid) street layout makes destinations clear and routes easy to navigate. The TOD will have an “urban feel” with pedestrian-oriented building facades, ground-floor shops, and distinctive public spaces.

Depending on the planned location of the transit stop, the TOD can be located on the south side of the Dulles Greenway or could straddle the road. If the TOD’s transit stop is located outside the median of the Dulles Greenway, the TOD should be located completely on the same side of the roadway. If the transit stop is located within the median of the roadway, the TOD could be located on both sides of the Dulles Greenway preferably with an urban deck.

The TOD will comprise a commercial core and an outer core. In addition, the surrounding area will have a transit-supportive role. Transit stops will be located in the center of the commercial core. The TOD will encompass an area no greater than that defined by the 1/2 mile radius from TOD edge to the transit stop to ensure compact mixed-use development, with reliance on transit and pedestrian circulation. This circulation will be implemented through a traditional network of grid streets with the pattern extending into the transit-supportive area.

The highest land use intensities will be located close to the transit stop at the commercial core (1/4-mile from the transit stop). The commercial core should have the most “urban-feel” with a vertical mix of uses, such as ground-floor shops and upper story residences, and public gathering places. Land uses will diminish in intensity as they increase in distance from the transit stop, although they will continue the same grid pattern. The TOD will be surrounded by a transit-supportive area, providing for a complementary density and design transition from the intense TOD to the less-intense development outside the TOD.

The development intensity of a TOD will be phased when road and transit capacity can support it. The County will consider density increases when there is adequate transportation capability to handle the associated traffic increases (roads, bus, and rail). Each density phase can be achieved when the next level of transportation capacity is planned, programmed, designed, and fully funded for construction either by public programs, a joint public/private venture, a consortium of property owners, or the private sector, in order to ensure adequate transportation capacity.

Transit-Oriented Development (TOD) Policies

1. The location for TOD will be determined when a proposal for the development of a TOD complies with the policies of this Plan and meets these seven criteria:
 - a. The location provides road access with adequate capacity and a network that supports bus transit to the transit stop located at the center of the TOD ensuring timely, efficient transit service.
 - b. The location is between interchanges, so that the intensity of the TOD is supported by two interchanges, and so that auto-oriented land uses are conveniently separated from transit-oriented land uses. When rail serves the TOD, the rail can either leave the median of the Dulles Greenway or remain in the median and not be hampered by the configuration of the road network. Dulles Greenway interchanges should not be congested by the high-density land uses planned for the TOD.
 - c. There is sufficient land area to support the development needed to sustain bus and rail transit and the size meets the TOD size policies included in the Plan.
 - d. The location has minimal environmental constraints, such as RSCOD and steep slopes.
 - e. The location will not negatively affect established neighborhoods by promoting through-traffic and other such intrusions to the neighborhood.
 - f. The location can clearly provide a transit opportunity that can be engineered to serve the TOD, including accommodating rail in the median of the Dulles Greenway.
 - g. The location does not harm the planned regional road network or planned regional transit facilities.
2. The TOD will be located between the Route 607 and Route 772 interchanges.
3. TODs will be located between the Dulles Greenway interchanges. TOD edges will be located no closer than 1,500 feet from the center point of an interchange.
4. The preferred location for a TOD is completely on the south side of the Dulles Greenway. If the transit

facility is located in the median of the Dulles Greenway, the TOD can extend to both sides of the Dulles Greenway.

5. The land use mix (measured as a percentage of the gross land area) in a TOD will generally comply with the following ratios:

Land Use Category*	Minimum Required	Maximum Permitted
a. Residential	20%	50%
b. Regional Office	20%	50%
c. Commercial Retail & Services	10%	30%
d. Public Parks, Civic & Open Space	15%	No Maximum

* Retail Policy guidance provided in *Countywide Retail Plan*

6. The TOD will contain a mix of uses including residential uses as well as two or more significant tax-producing land uses that are mutually supporting.
7. The County will encourage the development of a mix of housing types, densities, and building types in the TOD.
8. The TOD will consist of a commercial core, an outer core. The commercial core will extend to 1/4-mile from the transit stop. The outer core will extend from 1/4-mile to 1/2-mile out from the transit stop. In addition, there will be a transit supportive area surrounding the TOD. It will extend from the outer core edge (1/2-mile) to one mile from the transit stop.
9. Transit stops will be located in the commercial core. The preferred location of the transit stop is at least 1/2-mile off of the Dulles Greenway to maximize the TOD development within a 1/2-mile radius; however, if upon further study, cost, engineering, and/or design characteristics prohibit the transit stop from leaving the Dulles Greenway median, the transit stop could be within the median and the TOD could extend to either or both sides of the Dulles Greenway.
10. The TOD will provide pedestrian-scale development with a mix of high-density residential, commercial, public, personal services, and employment uses. Pedestrian circulation will be enhanced by short blocks arranged in a rectilinear grid-street pattern. The TOD will have an “urban feel” with pedestrian-oriented building facades, ground-floor shops, and streets culminating in distinctive public spaces.
11. TOD land uses should include convenience retail uses and civic uses, such as public plazas, libraries, day care, and postal services. The commercial core will contain the highest land use intensities in the Dulles Greenway corridor. Use intensities will step down from the commercial core to the outer core to the transit supportive area.
12. The TOD land use intensity will be phased as alternative modes of transit are available. Use intensities may increase as the specified mode of transit is planned, scheduled, designed, and funded to serve the TOD. The following density increments may be achieved:
 - a. The density for the TOD when served only by roads is up to 16 dwelling units per acre for residential development and up to 0.6 FAR for non-residential development contingent upon the

- availability of utilities, pedestrian and bicycle travelways, public facilities, and conformance to the community-design and growth-management policies of the *Revised General Plan*.
- b. When bus service and facilities are planned, scheduled, designed and fully funded to serve the TOD, residential densities may increase above 16 dwelling units per acre up to 32 dwelling units per acre and a non-residential FAR above 0.6 up to 1.0, contingent upon the availability of utilities, pedestrian and bicycle travelways, public facilities, and conformance to the community-design and growth-management policies of the *Revised General Plan*.
 - c. When rail transit and facilities are planned, scheduled, designed, and fully funded to serve the TOD, residential densities can increase above 32 dwelling units per acre up to 50 dwelling units per acre and a non-residential FAR above 1.0 to 2.0.
- 13. A vertical mix of uses is encouraged in multi-story buildings in the commercial core, such as ground floor retail with upper story residences or offices. When a vertical mix of uses is provided, the land use matrix will be more flexible to accommodate this type of development.
 - 14. The provision of an urban deck is encouraged in the design of the transit station and TOD if the transit station is located in the median of the Dulles Greenway to ensure an appealing convenient pedestrian environment and convenient access to the TOD land uses.
 - 15. The transit supportive area will consist of the land located between approximately 1/2-mile and one mile from the transit stop.
 - 16. The transit supportive area is meant to provide a transitional and complementary area between the high-density core and the surrounding development pattern outside of the TOD.
 - 17. Transit-supportive areas should provide a mix of land uses that complement and support TOD land uses. Commercial uses within the transit supportive area should not compete with the major retail, office, and service commercial in the Commercial Core of the TOD.
 - 18. The transit-supportive area street network should complement and support the TOD area street network by providing multiple and direct vehicular, bicycle, and pedestrian connections to the transit station.
 - 19. Transit supportive areas will be developed to reflect their underlying land use designations. Business land use areas will be permitted to develop to a maximum density of 24.0 dwelling units per acre depending on the availability of bus service to the nearby TOD core. Higher density residential or mixed-use areas should be clustered in pockets along transit corridors to support feeder bus travel.
 - 20. The County may consider an additional TOD west of the Route 772 interchange in the event the Dulles Corridor Bus Rapid Transit/Rail Project is planned to extend beyond the Route 772 Interchange.

b. Transit-Related Employment Center (TREC)

A Transit-Related Employment Center (TREC) or Special Activity destination is planned north and west of the Route 606 interchange with the Dulles Greenway and the regional park and ride facility. A transit stop is planned to serve the Dulles North Regional Transit Center, a regional park and ride lot that will accommodate 750 vehicles initially, and eventually 6,000 vehicles in parking garages. The park and ride lot is located within 1/2-mile of the planned transit stop, and this type of use is incompatible with TOD. However, because a transit station is planned for this area, the County plans to make the fullest use of the land close to that stop to be supportive of and served by the transit service. The TREC is planned for concentrated compact employment use. This area also may be appropriate for a special activity such as a professional sports stadium. The location of the park and ride lot and the transit stop make the 1/2-mile area

close to the stop attractive for a Special Activity use. The TREC will encompass an area no larger than 1/2-mile north of the station. This area is limited by the Dulles Airport property and the park and ride lot to the southeast, and the Route 606/Dulles Greenway interchange to the south.

The TREC will provide compact, high-intensity employment uses and/or a Special Activity use, with a support retail and service component. Pedestrian circulation will be enhanced by short blocks arranged in a rectilinear grid-street pattern. The street pattern should be simple, memorable, and direct, avoiding circuitous routes. Pedestrian connections from the employment or Special Activity use to the transit station and park and ride lot should be safe, convenient, and easy to navigate.

To reach the allowable net FAR of 2.0 in the TREC, an applicant will ensure that travel to existing and future transportation facilities is not encumbered. This includes providing necessary roadway improvements such that access to Dulles Airport, the Dulles North Transit Center, and the transit station are not negatively affected by high-intensity development on the TREC.

Transit-Related Employment Center (TREC) Policies

1. The TREC will be located to the north and west of the Dulles Greenway and the Route 606 interchange. This area, encumbered by the regional park and ride facility, the RSCOD, Route 606, Route 789, and the 65 Ldn cannot be developed as a TOD.
2. The TREC will be located entirely on the north side of the Dulles Greenway north of the Dulles Airport property, no further than 1/2-mile from the transit stop.
3. The location for the TREC will be determined when a proposal for the development of a TREC complies with the policies of this Plan and meets these six criteria:
 - a. The location provides road access with adequate capacity and a network that supports bus transit to the transit stop located south of the TREC ensuring timely, efficient transit service.
 - b. The location will provide road improvements such that the auto-oriented land uses are conveniently separated from transit-oriented land uses. When rail serves the TREC, the rail will not be hampered by the configuration of the road network. Dulles Greenway interchanges should not be congested by the high-intensity land uses planned for the TREC.
 - c. The location will not negatively affect established neighborhoods by promoting through-traffic and other such intrusions to the neighborhood.
 - d. The location can clearly provide a transit opportunity that can be engineered to serve the TREC, including accommodating rail in the median of the Dulles Greenway and safe and convenient access to the transit station.
 - e. Because of the planned land use intensity, the location does not harm the planned regional road network or planned regional transit facilities.
4. The land use mix (measured as a percentage of the gross land area) in a TREC will generally comply with the following ratios:

Land Use Category*	Minimum Required	Maximum Permitted
a. Regional Office	25%	75%
b. Light Industrial	0%	20%
c. Special Activity Uses	0%	50%
d. Commercial Retail & Services	10%	30%
e. Public Parks, Civic & Open Space	15%	No Maximum

* Retail Policy guidance provided in *Countywide Retail Plan*

5. The County will encourage the cooperation of all landowners in the development of the TREC to ensure conformance with the TREC concept set forth in the *Revised General Plan*.
6. The TREC land use intensity will be phased as alternative modes of transit are available. Use intensities may increase as the specified mode of transit is planned, scheduled, designed, and funded to serve the TREC. The following density increments may be achieved:
 - a. The density for the TREC when served only by roads is up to 0.6 FAR for non-residential development contingent upon the availability of utilities, pedestrian and bicycle travelways, public facilities, and conformance to the community-design and growth-management policies of the *Revised General Plan*.
 - b. When bus service and facilities are planned, scheduled, designed and fully funded to serve the TREC, non-residential FAR above 0.6 up to 1.0, contingent upon the availability of utilities, pedestrian and bicycle travelways, public facilities, and conformance to the community-design and growth-management policies of the *Revised General Plan*.
 - c. When rail transit and facilities are planned, scheduled, designed, and fully funded to serve the TREC, non-residential FAR above 1.0 to 2.0.
7. To reach the allowable net FAR of 2.0 in the TREC, an applicant will ensure that travel to existing transportation facilities is not encumbered, including providing necessary regional roadway improvements such that access to Dulles Airport, the Dulles North Transit Center, or the transit station are not negatively impacted. Roadway improvements include maintaining an acceptable level of service for Routes 789, 606, and 607.
8. The County may consider the development of FAR above 0.4 north of the Greenway and west of the Broad Run if the applicant demonstrates the following:
 - a. Loudoun County Parkway, Shellhorn Road, Route 789, Route 606, and the Dulles Greenway can continue to function at acceptable levels.
 - b. Negative impact to the RSCOD is minimized.
 - c. Access to the Dulles North Transit Center is not hampered.
 - d. A unified development plan is provided that establishes clear pedestrian and transit linkages between the areas east and west of the Broad Run.
 - e. Adequate, safe, and logical pedestrian connections can be made from the land uses on the west side of the Broad Run to access the transit stop east of Broad Run.

If all of these criteria cannot be met, the area north of the Greenway and west of the Broad Run will be developed under the Keynote Employment policies of this Plan.

9. The highest land use intensities in the TREC will be closest to the transit station, and use intensities will step down as uses radiate to the outer edge of the TREC.
10. The County will work with the Metropolitan Washington Airports Authority to encourage use of Dulles Airport property for the rail maintenance and storage yard.

3. Keynote Employment Centers

Keynote Employment Centers are 100-percent premier office or research-and-development centers supported by ancillary retail and personal services for employees. They do not permit a residential component. Keynote Employment centers have high visibility along major corridors, their structures accented with heavily landscaped greens and tree-lined boulevards, and reflect the County's growing prominence as a global crossroads for business. Keynote Employment Centers house headquarters for businesses such as America Online and MCI/WorldCom.

The preferred location for Keynote Employment Centers is along Route 7 and the Dulles Greenway. The Route 7 corridor will maintain its campus-like appearance and continue to be one of the primary locations for Keynote Employment Centers. The County should vigorously attempt to locate regional and nationally oriented office centers on Route 7 and Route 28 and in the Dulles Greenway corridor.

Keynote Employment Center Policies

1. Keynote Employment uses are defined as large-scale regional office developments that feature high visual quality and high trip-generating uses, including office parks, research and development parks, corporate headquarters, and similar uses of a large scale (e.g., 40,000 gross square feet or greater). Keynote Employment areas will be single-use with the ancillary services necessary to support the predominant office use.
2. Keynote Employment along Route 7 should be set back a minimum of 300 feet from the right of way, with green buffering, preferably native vegetation.
3. Keynote Employment areas are identified on the Land Use Map and generally are located along Route 7 and the eastern end of the Dulles Greenway. These roads are prominent corridors in the County and are intended to be the location of premier office sites for high-visibility.
4. The land use mix (measured as a percentage of the land area) in a Keynote Employment area generally will comply with the following ratios:

Land Use Category*	Minimum Required	Maximum Permitted
a. Regional Office	70%	85%
b. Commercial Retail & Services*	0%	10%
c. Public & Civic	5%	No Maximum
d. Public Parks & Open Space	10%	No Maximum

* Retail Policy guidance provided in *Countywide Retail Plan*

5. The County encourages the use of structured parking in the Keynote Employment areas.
6. The Zoning Ordinance will distinguish Keynote Employment areas from other Office Districts.

4. Regional Office Uses

Regional Office uses support a variety of office employment in the convenience of a mixed-use setting. Large Regional Office uses outside of an Urban Center are to be developed along major collector roads such as Route 607, and Route 625. They are to have a mix of housing and public and civic space, as well as a limited amount of retail and light/industrial flex uses. The County supports the continued growth of educational and institutional uses as complementary uses to regional office development.

Regional Office Use Policies

1. High-Density Residential uses may be permitted in conjunction with a larger Regional Office development that exceeds 75 acres in buildable area. These residential areas will be subject to the density and design criteria outlined in the High-Density Residential policies of this Plan and contingent upon the availability of utilities, transportation facilities, and public services and implementation of the community design and growth management objectives of this Plan.
2. The land use mix (measured as a percentage of the land area) in a Regional Office area generally will comply with the following ratios:

Land Use Category*	Minimum Required	Maximum Permitted
a. High Density Residential	15%	25%
b. Regional Office	50%	70%
c. Commercial Retail & Services*	0%	10%
d. Light Industrial/Flex	0%	20%
e. Overall Commercial & Light Industrial (c plus d)	0%	20%
f. Public & Civic	5%	No Maximum
g. Public Parks & Open Space	10%	No Maximum

* Retail Policy guidance provided in *Countywide Retail Plan*

5. Light-Industrial Uses

Light-Industrial uses are an integral component of the County's Business land use areas. The County encourages the co-location of light-industrial uses that are compatible with office, commercial, and residential development. Campus-style industrial parks are appropriate along the major corridors of the County. Warehouse, manufacturing and repair uses should be located along the less visible industrial collector roads and should have high accessibility to Dulles Airport.

Light-Industrial Use Policies

1. Light-Industrial uses, including flex, research and development, and smaller-scale manufacturing, are considered an integral component of Business areas. The County will permit industrial uses that are compatible with office, commercial, and residential development by virtue of size and the lack of outdoor storage, or manufacturing activities, and other activities or emissions that could have a detrimental impact on surrounding residential or business uses.

2. Light-Industrial and regional office uses are encouraged in compact, high-intensity nodes on the arterial corridors of the County in areas designated Business Community on the Land Use Map.
3. Light-Industrial uses will be limited to those that do not require outside storage and which have negligible emissions (i.e., noise, odor, vibration).
4. The provision of safe, convenient, and attractive pedestrian access to nearby residential areas and to local businesses for ancillary retail services and goods will be evaluated in approving or denying such proposals.
5. The land use mix (measured as a percentage of the land area) in Light-Industrial communities generally will comply with the following ratios:

Land Use Category*	Minimum Required	Maximum Permitted
a. High Density Residential (outside noise impact area)	0%	25%
b. Commercial Retail & Services*	0%	10%
c. Regional Office	0%	40%
d. Overall Business Uses (b & c combined)	0%	40%
e. Light Industrial/Flex	45%	85%
f. Public & Civic	5%	No Maximum
g. Public Parks & Open Space	10%	No Maximum

* Retail Policy guidance provided in *Countywide Retail Plan*

6. High-Density Residential uses may be permitted in conjunction with a Light-Industrial development. Residential areas will be subject to the designated density and design criteria outlined in the residential policies of this Plan and subject to the availability of utilities, roads, and public services, compliance with the countywide proffer policies, and implementation of the community design guidelines and growth management objectives of this Plan.

6. Parking

In the past, the size, location, and configuration of parking lots has sent a clear and simple message: “arrive by car only.” By changing the standards for parking design, a friendlier environment for alternative forms of transportation, including walking and bicycling is created. The parking standards for Business land uses contained here reflect the County’s emphasis on multi-modal transportation, mixed-use development, and environmental protection. Placing parking to the rear of buildings encourages pedestrians to approach because they are not traversing wide expanses of asphalt. Encouraging shared parking among businesses provides the same benefit. The benefits of on-street parking include traffic calming and protecting pedestrians from on-street traffic. Structured parking provides a high-quality look to business development and protects the environment by reducing stormwater run-off.

Suburban Parking Policies

1. The County discourages developments from providing additional impervious surface that exceeds the parking requirements of the Zoning Ordinance.
2. The County will continue its practice of reducing parking requirements for development within 1,500

feet of existing transit centers in order to encourage transit usage.

3. The County will reduce parking requirements when a development proposal includes Transportation Demand Management (TDM) strategies that can be demonstrated to reduce trip making to and from the development. Such strategies may include, but are not limited to carpool and vanpool coordination, parking incentive programs, transit subsidies and teleworking programs, and coordination with non-auto arrival modes, such as transit, bicycle, or pedestrian, when facilities for these modes are in place. Parking reductions in such instances will be commensurate with the demonstrated reduced demand for parking.
4. The County will encourage existing and new employment and business uses to support alternative travel modes by offering ridesharing and car/vanpooling, minimizing the availability of parking beyond current County requirements, and providing site amenities (e.g., transit shelters and bicycle lockers) as appropriate. Employers also should investigate other incentives (e.g., parking cashout programs and telework policies).
5. The County will provide incentives to encourage structured parking in all Business land use areas, especially Keynote Employment areas.
6. The Zoning Ordinance will continue to allow shared/reduced parking based upon the joint-use, time-of-day, or time-of-week needs of different uses.
7. Where possible, and in coordination with VDOT, the County will credit on-street parking adjacent to a commercial use toward meeting parking requirements.
8. The County encourages the use of pervious parking surfaces where existing soil types and current technology will allow.
9. Where appropriate, parking lots will be placed to the rear of buildings.
10. Design guidelines will be established to facilitate adequate landscaping, berms, pedestrian access, and environmentally sound stormwater run-off.

C. General Industrial

Industrial Centers are intended to accommodate the continued operation and expansion of major industrial uses in the County and to provide a degree of protection for industrial uses from other land uses. Primary land uses in these industrial areas are General Industry and Heavy Industry.

General Industrial uses are predominantly labor-intensive industrial and commercial uses. Their outdoor storage requirements, noise levels, and emissions present difficult design issues and make them incompatible with residential development. Associated activities also make them incompatible with residential and other business areas. Such developments are best located away from major roads, accessed from within an industrial park, and limited to a minor portion of a larger development.

Heavy Industry is not conducive to mixed-use development. Heavy industrial sites generally are limited to land within the 65+ Ldn (day/night average sound level) Noise Zone or where residential development is otherwise undesirable. The County requires that industrial uses provide adequate buffers and protection to mitigate negative impacts on surrounding uses. Quarries are considered Heavy Industrial uses. Policies governing quarries are located in Chapter Five, the Green Infrastructure.

General Industrial Use Policies

1. New industrial centers will be located in accordance with the Land Use Map and the community design guidelines and land use policies of this Plan.
2. The County will require that industrial uses provide sufficient buffering from nearby residential areas and business uses to ensure that the effects of noise, vibration, odor, or other emissions that may be associated with the industry do not exceed specified levels.
3. Industrial uses will be located in the 65+ Ldn (Day Night average sound level) Noise Zone as measured on the Integrated Noise Model Mod 3.8 and projected by the Federal Aviation Authority in its noise studies for the Washington Dulles International Airport when the facility is operating at full five-runway capacity and only as designated in the County's Comprehensive Plan.
4. Land bordering Route 606 and south of the Washington Dulles International Airport will be designated for General Industrial uses (e.g., manufacturing, bus/trucking repair facilities, ware-house and assembly, and airport serving uses).
5. Light Industrial Development may be located as an ancillary component of a General Industrial Use development.
6. Where General Industrial uses are proposed to develop in free-standing industrial parks the following guidelines will be met:
 - a. Screen all outdoor storage and equipment parking areas from adjoining non-industrial properties and roads.
 - b. Locate allowed retail uses along internal street frontages.
 - c. Minimize the number of entrances to the industrial park from major collector or arterial roads.
7. General Industrial uses will not be adjacent to a residential neighborhood.
8. The land use mix (measured as a percentage of the land area) in a General Industrial Area generally will comply with the following ratios:

Land Use Category*	Minimum Required	Maximum Permitted
a. Residential	0%	0%
b. Commercial Retail & Services*	0%	10%
c. Office	0%	20%
d. Light Industrial	0%	20%
e. Industrial	70%	90%
f. Public & Civic	0%	No Maximum
g. Public Parks & Open Space	10%	No Maximum

* Retail Policy guidance provided in *Countywide Retail Plan*

9. Heavy Industry uses will be buffered from residential uses. This separation may be accomplished by locating less-intensive employment uses permitted in Regional Office or Light Industrial areas in transitional areas adjoining the Heavy Industry use. The width of the transition area adjoining the Heavy Industrial use will be determined on a case-by-case basis. The County may consider the

existence of natural or manmade barriers between the uses (such as streams and floodplains or major collector or arterial roads, existing buffers or greenbelts and topographic features of the area).

10. Heavy Industry uses should have access to, but be screened from, views along arterial roads. Outdoor activities such as equipment parking and material storage should be screened from view from adjoining roads.
11. The County will place a limitation on the size of heavy industry, and appropriate linkages will be established based on road capacity, employment generation, and water requirements.
12. The County will protect the Luck Stone Quarry from incompatible neighboring uses by ensuring that encroaching new development not hinder the operation of the quarry.

D. Special Activity Uses

Special Activity uses are single uses or activities that may not be compatible with the mixed-use communities in the Suburban Policy Area due to their scale. Special Activity uses include professional sports stadiums, conference facilities, and theme parks. While economic benefit would be derived from the use and from ancillary development spurred by its existence, the Special Activity use substantially could affect surrounding land uses.

Loudoun County's unique amenities increase its potential to attract Special Activity uses that would serve the region. The Washington Dulles International Airport, the Dulles Greenway, and future transit make the Toll Road planning area especially attractive.

The County encourages the development of Special Activity uses in the Toll Road planning area and will evaluate Special Activity use proposals on a set of criteria to ensure the selection of the best site and the mitigation of potentially adverse impacts. The Land Use Map identifies areas for possible Special Activity use.

Special Activity Use Policies

1. Special Activity uses will be considered only in areas identified on the Land Use Map. Special Activity uses which are not permitted in any other County zoning district except the PD-SA zoning district, may be permitted only in the identified Special Activity Area.
2. Special Activity use proposals must meet all of the following nine criteria:
 - a. All Special Activity proposals will be evaluated for their fiscal impacts and the use must promote the County's economic development goals and must be expected to provide a positive fiscal benefit to the County.
 - b. The use must be served by central sewer and water facilities.
 - c. To discourage through traffic in residential neighborhoods, the use must be served by an adequate road network, operating at an acceptable level of service, as defined by the County's *Facilities Standards Manual* (FSM), with access to the regional road network via the Dulles Greenway and other arterial and major collector roads. The use will be designed and located to be compatible with traffic movement on regional roads and achieve acceptable levels of service (D or better) on those roads. Where a facility is adjacent to the Dulles Greenway, every effort should be made to work with the Toll Road Investors Partnership II to develop dedicated "slip ramps" that will provide direct access to parking areas during events.

- d. The use must be designed to accommodate transit facilities and must demonstrate a commitment to providing access to public transit (bus or rail) on the site to link those facilities to existing or planned mass transit service.
- e. The use must be designed to meet specific standards for environmental quality and for impacts on surrounding uses.
- f. Potential impacts from noise, lighting, signs, parking, and similar activities must be addressed and mitigated through the rezoning process.
- g. The use must be adequately separated and buffered from incompatible adjacent uses. To adequately buffer residential neighborhoods from high impact uses in the Special Activity Area, arenas or stadiums will have a building setback of at least 1,000 feet from Route 772 and 300 feet from the Dulles Greenway.
- h. If the use will be visible from any arterial road, structures will be designed and located to enhance the visual character of the corridor. Outdoor storage or display and activities such as loading areas will not be visible from any arterial road.
- i. Any PD-SA rezoning proposal must include a detailed outline of activities to be conducted on the site, the nature and extent of ancillary uses, proposed hours of operation, and the anticipated frequency and duration of proposed events.

Suburban Policy Area Land Use Matrix

Land Use	Definition	Density		
Residential	Mixed-type housing neighborhoods. Allows for mix of residential supportive uses.	Residential: 1.0 to 4.0 dus/acre		
High-Density Residential	Single-family attached and multi-family housing. Allows for mix of residential and supportive cases.	Residential: 8.0-16.0 dus/acre 8.0-24.0 dus/acre in Toll Road corridor		
Town Center	A “downtown” or “Community Core”. Mixed-use with emphasis on pedestrian movement (vs. vehicular).	Res: 8.0-16.0 dus/acre Non-Res. to 0.4 FAR		
Urban Center	Intensive, large-scale mixed-use. Rectilinear layout with public greens & squares with landscaped streets & pedestrian-oriented buildings.	Phase	<u>Res. dus/acre</u>	<u>Non-Res. FAR</u>
		w/Roads	8.0-16.0	to 0.4
		w/Bus	to 24.0	0.4-1.0
		w/Rail	to 24.0	1.0-2.0
Transit Node: Transit-Oriented Development (TOD)	Compact mixed-use development at densities to support transit. Streetscapes and building frontages that are pedestrian scale.	Phase	<u>Res. dus/acre</u>	<u>Non-Res. FAR</u>
		w/Roads	8.0-24.0	to 0.6
		w/Bus	to 32.0	0.6 to 1.0
		w/Rail	to 50.0	1.0 to 2.0
Transit Node: Transit-Related Employment Center (TREC)	Compact employment-based development at densities to support transit. Streetscapes and building frontages that are pedestrian scale. No residential component, where limited by airport Ldn.	Phase	<u>Res. dus/acre</u>	<u>Non-Res. FAR</u>
		w/Roads	N/A	to 0.6
		w/Bus		0.6 to 1.0
		w/Rail		to 2.0 (2.0 net cap)
Keynote Employment	100% office or research & development centers supported by ancillary retail & services. Corporate headquarters/premiere office development, heavily landscaped and visually impressive.	Res: N/A Non-Res. FAR: 0.40 to 1.0		
Regional Office	Mixed-use development supports a variety of office with some high-density residential and supportive services and retail.	Res: 8.0-24.0 dus/acre Non Res. FAR 0.40-1.00		
Light Industrial	Lowrise (primarily 2-story or less) development, includes flex/warehouse, small-scale manufacturing. Compatible with office commercial and residential-no outdoor storage or emissions.	Res: 8.0-24.0 dus/acre Non-Res. FAR 0.30-0.40		
General Industrial	Labor intensive industrial & commercial uses. Buffered and separated from residential. Outdoor storage, noise, & emissions.	Res: N/A Non-Res. FAR: 0.30-0.40		